File

Toronto Office

The Province of Alberta

IN THE MATTER OF "THE NATURAL GAS UTILITIES ACT"

—and—

IN THE MATTER OF an Enquiry into Scheme to be adopted for Gathering, Processing and Transmission of Natural Gas in Turner Valley

G. M. BLACKSTOCK, Esq., K.C., *Chairman*

Dr. E. H. BOOMER, F.C.I.C., *Commissioner*

Session:

CALGARY, Alberta November 15th, 1945

VOLUME 54

I N D E X

VOLUME 54.

November 15th, 1945.

WITNESSES

E X H I B I T S

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Corrections

VOLUME 52

Page	Line	Correction
4032	5.	Change "not go in" to "not go on".
4032	8	" "will not go off" to "Will get off".
4066	2	" "from fuel oil " to "between fuel oil"
4069	9	"first word "from" to "in".
4069	16	" "from his operations" to "in his operations".
4074	1	" "the wholesaler rather than" to "the wholesaler or rather"

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VOLUME 22

Page	Line	Correction
2062	4.	Change "not go in" to "not go on".
2062	6	" "will not go out" to "Will get out".
2062	8	" "from fuel oil " to "between fuel oil"
2062	1	"first word "from" to "in".
2062	10	" "from is operators" to "in the operations".
2062	2	" "the wholesaler rather than" to "the wholesaler or retail"

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H-1-1 9.30 a.m.

VOLUME 54

9.30 A. M. Session
November 15th, 1945.

H. Zinder, recalled,
Cross-Exam. by Mr. Chambers.

HANINA ZINDER, recalled, cross-examination by Mr. Chambers:

Q Mr.Zinder, I think in giving your qualifications as an expert at the opening of your testimony, you told us that you had been, in the early days after you left University, with Detroit-Edison Company, was it?

A The Commonwealth Edison Company.

Q And your duties there were in connection with electrical matters?

A That is right.

Q And then you were with one of the State Commissions for a time, the Wisconsin Commission, is that right?

A That is correct.

Q And what was the nature of your duties, not too much in detail?

A The Wisconsin Commission regulated all public utilities in the State, electric utilities and gas utilities, which were used by the large manufacturing companies.....

Q What I am getting at is this, what was the particular nature of your duties with the Commission?

A I was called Chief Rate Analyst for the Commission.

Q And then from there you went to Washington, and then when the Federal Power Commission was organized you went with them at their inception, is that right?

A No, not at their inception, Mr. Chambers. They had been organized since 1920 under an old Act, and in 1935 under the revised Act, and I joined the Commission in 1937 at the end of the year.

Q And you were with that Commission six or seven years?

A Until December 31st, 1944.

Q And when you were with that Commission you were concerned particularly with rates?

A That is correct.

Q Now then, Mr.Zinder, you have read this Natural Gas Utilities Act, or parts of it, at least?

A I have.

Q And in the light of your experience in matters of regulation is it fair to say that you can see that there are problems or new matters raised here that probably there is not much precedent for?

A I would say so in my experience, Mr. Chambers.

Q Well now, with that in mind, I am just going to try to discuss with you as briefly as I can some of the theories or philosophy behind these matters, because after all this Board is seeking to apply to the situation here what is fair and reasonable as between all the parties concerned, and my purpose in putting these questions to you is to indicate to the Board in a general way probably some of the ways in which some things have been dealt with in the States?

A I see.

Q I would like just to discuss with you first your understanding, or from your experience and reading, what principle or philosophy is behind public regulations. Now, as I understand it, there are three broad agencies or manners of carrying on business. One we know of is private enterprise?

A That is right.

Q And then we have in this modern day what is known as Government ownership, and Government in business?

A Yes.

Q And then we also have what is known as public utility operation. Would you please tell us what your conception of public utility regulation is in the light of these other two things that I have mentioned?

A A public utility is generally considered to be a business which is clothed with a substantial public interest. That public interest is also accompanied by a tendency for, or not a tendency, but a characteristic of obtaining the lowest cost service under essentially what might be termed monopoly conditions.

Q Yes?

A Or having one supplier or one company serving the market. As an example, electric utilities who supply an essential service for the great bulk of the population is one of the early public utilities. Railroads prior to that time were considered to be public utilities. Even hotels at one time were considered public utilities. I cannot quite recall the language, but I think the language in the case of Munn v. Illinois in the States is the essential language defining what is a public utility.

Q Now, would this be probably a fair way to put it or a correct way to put it, that a public utility operation has certain of the attributes of the private enterprise and is subject, not to Government operation but to Government regulation, because there are certain matters of public policy that render it desirable that the private enterprise should not have the absolute say and judgment as to how its business is carried on, and how its profits are made. Would that be it more or less generally?

A That would be a consideration certainly, yes.

Q Yes. And we hear the words in connection with public utilities that the plant and equipment and the commodities in certain

cases are devoted to the public service?

A Yes.

Q And that is where the matter of public interest or public policy comes in?

A Yes.

Q Now I suggest to you that some of the reasons whereby the Government or the public are interested may be these, that the service or the commodity is of a general public interest in that it is not in all cases or in many cases protected or conserved by private enterprise?

A I would say that that would be one of the factors to take into consideration.

Q That would be one because private enterprises are concerned primarily in making profits for the shareholders?

A That is right.

Q And they do not regard themselves as trustees for the public?

A That is right.

Q Now then, the property having been devoted to the public service by the passing of a general statute or a particular statute, as I understand it the general practice of Governments is to name or appoint some body to administer the policy laid down in the Act and to decide as administrative acts how this matter of public policy should be carried out?

A That is right. Usually a designated Board or a Commission.

Q Now then as I understand it, we find running through practically all of the statutes in the United States, both the State and the Federal Statutues, and in the Statutes up here, that these Boards exercise their functions after hearing representations on behalf of the public and on behalf of the private companies?

A That is right.

Q And that one of the common things they have to decide is what are the fair and equitable and reasonable prices or charges that these companies make for the services they are rendering or the commodity they are supplying. You will find that practically in all these cases.

A That is one of the major problems, yes.

Q And that in effect means that the Board in carrying out its functions must decide what is just or reasonable in regard to any profits that the utility is to get?

A That has been the customary practice.

Q That has?

A Yes.

Q In other words, one of the main things is regulation of the profits, and in order to regulate profits they have got to regulate the revenue?

A That is right.

(Go to page 4201).

Q And in order to try to regulate their revenue or control the revenues of the utility, the Board has to ascertain what are reasonable prices to charge for the service that the utility renders?

A That is right.

Q And in the regulatory statutes, both in the United States and up here, we hear of the words "just and reasonable rates". I suppose you have come across those words?

A Yes.

Q And I am putting to you the question as to whether or not the term "just" does not really apply to the utility company.

MR. STEER: Without attempting to interrupt my learned friend's cross-examination, I might suggest that an interpretation of that word "just" is for the Board to decide.

THE CHAIRMAN: I fully agree.

MR. CHAMBERS: Now I have the impression, and very definitely so, that in these Hearings you, Mr. Chairman, have already ruled that you would like to hear opinions from witnesses and I am just trying to get this witness to give us his interpretation. I can ask him what he thinks of my understanding of the meaning of these various terms.

THE CHAIRMAN: If you want to do it that way, put to him your understanding and ask him if he agrees with it.

MR. CHAMBERS: I submit I do not have to do that but I will.

THE CHAIRMAN: I think perhaps it would be the better way to do it, Mr. Chambers.

MR. STEER: There is one further observation I

want to make and that is that Mr. Zinder has not been qualified as an expert in the English language.

MR. CHAMBERS: I am asking him, he has had a lot of experience with Boards in the United States how the Boards there apply these words "just and reasonable".

THE CHAIRMAN: You can ask him how, in his opinion, they appliedthe word "just" and the word "reasonable".

MR. CHAMBERS: I will adopt that question.

A It was done on the basis of determining the value and the investment in the utility property and a review of the expenses of the operation to determine their reasonableness and as a determination from that as to the amount of the earnings that would follow and measuring the resulting earnings which are termed "returns" in terms of per cent as to whether that rate of return was reasonable in the light of the return being earned by similar businesses under similar risks and conditions. In a very general way that is the way I did it.

Q Would this be a fair way to put it, in the light of what you have said? That insofar as the utility company is concerned, the word "just" is applied in the light and in the sense of making a fair profit and not an exorbitant profit or undue profit.

A Yes, I would say, generally speaking, that is right.

Q Now what is your conception of the use of this word "reasonable" as regards the customer or the man who gets the service or is supplied with the commodity?

A My conception would be that the rate he should pay would be sufficient to yield a return that was found reasonable by the process that I have just described. In other words,

the rates should cover the costs of the service and such costs are found by the Board to be reasonable.

Q Well now, I suggest that the cost of this service, and I am thinking of what has taken place here, would demand a dollar per mcf to give that service. How does the reasonableness fit in there?

A I would say, Mr. Chambers, that if the process which I have described has been carried out and the result is a price of one dollar per mcf that that should be the price established by the Board with possibly only one exception; if that price is so high as to destroy or cause the loss of the complete market, then, of course, it cannot be fixed because the estimated revenues in such a price would not be high enough to give the return as I have indicated. So I would say that under the formula and procedure I have outlined that would be the price to be established.

Q I am suggesting to you, then, Mr. Zinder, that the very fact the market would disappear under a rate like that is an indication that the rate is not reasonable and that the Board should not fix that kind of a rate.

A That is right.

Q In other words, I am suggesting to you that reasonableness is a term to be applied from the standpoint of the customer and that one test of that reasonableness is what is its value to him or its worth in his business and you should gauge that by what he can get other things for that would take the place of it, of this commodity.

A That is one test in the process of determining reasonableness, yes.

Q In other words, Mr. Zinder, is it not so in the practice

before American Boards and before the Federal Power Commission that reasonableness is something beyond which the rates cannot go and that that standard and that ceiling is what is reasonable from a customer's standpoint. Have you ever run into that in decisions of the Court or of the American Boards?

A I would say, Mr. Chambers, it is both from the customer's and the investor's point of view and interests. I have run into the question of determining whether rates that might be established would exceed the cost of alternative substitutes and such rates would represent the ceiling that could be charged. That is such level would represent the ceiling that could be charged any customer or class of customer. On the other hand, that net equation is the rate of return which includes the return to the investor that his cost should be reasonable and therefore the investor interest comes in at that point.

Q In other words, these words "just and reasonable" represent in effect the holding of a balance as between the customer and the utility?

A That is right.

Q And I suggest to you a situation might develop in utility cases, allowing 1 or 2 per cent return would result in a rate for gas, or any other commodity, which from its very size would not find any customers.

A That is right. That is possible.

Q What I am therefore suggesting is that the utility Board in practice, if it is going to apply these words "just and reasonable" in the sense they have been commonly applied in the past, while they can assist to protect the utility and the public, they cannot by mere regulations guarantee

a revenue to a utility company that will allow it to operate at a profit and take a fair return on its money.

A That is certainly correct in my opinion.

THE CHAIRMAN: That is just another way of saying that a regulated utility gets all the traffic will stand?

MR. CHAMBERS: Yes.

THE CHAIRMAN: And an unregulated business goes out and gets all the traffic will bear. If the result is on the red side of the ledger, they both go out of business.

MR. CHAMBERS: I go with you probably 75 per cent of the way. This is what I am putting to the witness and I want to get his reaction, that a utility Board's function is not to give or permit the utility company to get all the traffic will stand.

THE CHAIRMAN: Under regulation.

MR. CHAMBERS: If it results in an exorbitant or unduly large return.

A I would say that is correct, yes. That is your example, Mr. Chambers, of a situation where a 1 or 2 per cent rate of return results that prices which had reached the ceiling as to the value of the service is one example and therefore the rate would be really all the traffic would bear. But if that ceiling had not been reached, then your various rates could be set which might yield the company a fair per cent rate of return.

Q Yes.

A Then I would judge the Board would then get it down to what is a reasonable rate under those circumstances and it would not be all the traffic would bear.

Q Well then as I understand it one of the functions, one of the main functions of this Board is, having this, or under this, ceiling of reasonableness, to permit or to see that the Utility Company gets sufficient revenue to pay its operating expenses, or a fair return on its, on a fair rate base, and its depreciation ?

A That is right.

Q Now then I suggest to you that there is another important function which these Boards ordinarily have to discharge and that is, having decided or having determined that the utility has to get so much overall revenue, it has to decide that, as between the parties served by that utility, how they are going to contribute to or apportion as between themselves, that revenue which has to be supplied ?

A That is correct. That is an important, in my opinion, that is an important function of the usual committee.

Q So having ascertained the overall costs to the Utility Company, and when I say "overall costs", I mean the revenue, the net rate of return and depreciation and so on, it then, as you say, decides how it shall be raised and allocates that between the various parties who are getting the service, that is a fair way of putting it ?

A That is right.

Q Now I suggest to you, Mr. Zinder, as an utility expert, who has had to do with rate schedules and compilations of them and so on, that one of the bases of making that allocation is to find out as nearly as possible by some reasonable method the respective costs of the service specifically furnished to those individuals, is that a factor entering into the compilation of this rate schedule ?

A Yes that is.

Q And it is an important factor, is it not ?

A Very important, yes.

Q Now then as a background for one or two other questions which I intend to ask you, I am going to refer you to an excerpt found in Volume 17 of the transcript, Pages 1345 and 1346 and I am reading from the cross-examination of Mr. Brownie of the Gas Company on April 3rd last when I was cross-examining him:

"Q Mr. Brownie, am I right in this, that the district of Calgary and Southern Alberta is probably one of the most difficult to serve, - I am leaving out now the actual cost of producing gas and I have in mind, it is very cold in the winter at times and in the summer you do not use much and then in the winter you have variations from day to day, what would you say as to that?

A We do not have a good load factor.

Q As a matter of fact it is about as varied as you could get anywhere, is it not ?

A I have not compared them, Mr. Chambers.

Q But it is not good anyway ?

A It is not good.

Q And the poorer your load factor the more expensive operating conditions are, is that not right, taking them by and large ?

A Other things being equal.

Q Yes, and I have in mind that when you have a poor load factor you have substantial extensions which are not always in use as when there is a good load factor ?

A That is correct.

Q It is more or less very variable ?

A That is correct. "

Now you have run into this term "load factor" and "peak load demand" and so on ?

A I certainly have, I certainly have.

Q And those are matters that you have taken into consideration when you come to forming a rate schedule ?

A They are very important for that consideration.

Q Because those are things that substantially affect the cost ?

A They certainly do.

Q Now to illustrate what I have in mind, we will assume that there is or we will take a gas supply to an industrial plant we will say running twenty-four hours a day and seven days a week, and using a more or less uniform rate per day. Now as I understand it that is one of the ideal ways or one of the most economical loads to supply, is that right ?

A That is right, that is a high load factor load.

Q Yes, and on the other hand, an industry, we will take the other extreme, an industry that operates we will say only part of the year and it requires a seasonable load, that would be one of the most costly customers to supply, would it not, from the standpoint of an utility ?

A That is right.

Q Now would you say as a rate man, in the light of your experience in these matters, that those two customers would be entitled to the same rate per Mcf. for gas supplied, over-all generally, from the same field and so on ?

A They would not, in my opinion.

Q Why ?

A Because the cost of serving the low load factor customer is so

much higher than those to serve the high load factor customer. The low load factor customer causes substantial investments in relation to and in proportion to the volume used, whereas the high load factor customer causes or gives rise to a much less investment for the same volume, or it might be put on the proportional basis. I am not dealing now with the question of the diversity of those loads on the system to take those two customers. That would be my answer.

Q I see, I used those two customers at either extreme to illustrate the general principle ?

A Yes.

Q Now then would you consider for a moment the position of the domestic customer in this locality ?

A Yes.

Q And bear in mind when I am talking about the domestic customer here, I am talking about the domestic customer that uses gas for heating his home.

A Yes.

Q You see ?

A Yes.

Q Now it is obvious to you, from the weather now, that that domestic consumer load is very apt to vary and does vary considerably from winter to summer ?

A I have not been here in the summer Mr. Chambers, but - -

Q You will assume there is some difference ?

A That is right, but I understand there is quite a variation in temperature in Calgary as between summer temperatures and winter temperatures.

Q Then I am going to ask you to assume this, - you may not believe it but I am asking you to assume it, - that even in the winter

we have substantial variations of temperature from day to day, have you ever heard of the term "chinook" up in this country ?

A I have.

THE CHAIRMAN: Are you expecting one today, Mr. Chambers ?

MR. CHAMBERS: I am not expecting one but I would like to see one.

WITNESS: I might say I have been looking forward to seeing one myself.

Q MR. CHAMBERS: Well the variation in the winter affects the load factor of the domestic customer as well as the variation from winter to summer and so on ?

A That is right.

Q Yes, and would you say that the domestic consumer load here in this climate, assuming what I have told you is so, that we have a poor or a good load factor ?

A Under the conditions which you outlined, Mr. Chambers, I would assume that it would be a comparatively poor load factor, yes.

Q Now I am suggesting to you that the poorer the load factor, and I think you have already told me this, the poorer the load factor, taking it by and large, the initial investment in the plant is required to be larger than it would otherwise be ?

A That is right.

Q And incidentally I suggest that the operating costs or the administrative costs for that kind of a load are more expensive per Mcf. than they would be on the industrial load which I have referred to ?

A I think so.

Q Because it costs as much to read the meter showing the consumption in a five roomed house as it does the consumption and so

on in a large industrial plant, and things of that nature ?

A That is right.

Q And the same will apply to the buildings and so on ?

A It is within limits, probably the meter reading cost is about the same. It depends upon how often the meters are read. Usually it has been my practice to distribute meter readings costs on a per customer basis. There are some variations but that has been my practice anyway.

(Go to Page 4212)

Q That is, for the purpose of your compilation of rates, but what I am trying to bring out is that from the actual costs, I am suggesting to you that the cost of reading a meter in a five-roomed house is to all intents and purposes as great as to read a meter in a large, say packing plant that uses hundreds of times more gas. I mean the actual out-of-pocket cost, would it not be?

A There would be some difference in that meter reding, Mr. Chambers. It depends on the type of meters used.

Q But it would be out of proportion, would it not, the per MCF cost, the cost of reading the meter per MCF in allocating your costs for a thousand cubic feet, and the cost of the reading of the meter of the domestic consumer, the cost of reading the meter to the domestic consumer works out at several times more?

A Yes.

Q Than it would for the other?

A Yes. I am sorry, Mr.Chambers, I did not realize you were speaking in terms of unit costs.

A So that there are certain items of operating costs which are more?

A Yes, that is right.

Q And those meters that I have talked to you about are really one of the basic reasons why we find that the domestic rates are higher per MCF than industrial rates?

A I would certainly say so.

Q Now then, let us direct our attention, Mr. Zinder, to the Turner Valley proposition itself. You know the wet gas is gathered into the utility systems from the wellheads?

A Yes.

Q It is then compressed by that same system, there is a certain

amount of compression?

A Yes.

Q And then the gas is carried to the absorption plant where the wet gasoline content is taken out, you know that do you?

A Yes.

Q And then the remaining quantity is either scrubbed and sent to the market or it is stored for future market requirements?

A Yes.

A And I am asking you to assume, if you do not know it, that it is necessary in any event to remove that gasoline content from the gas so as to make the dry gas marketable?

A All right.

Q That is one of the things. Now, I am asking you in the light of those facts, what have you got to say as to the basis for the theory upon which the utility gathering company, and I am referring now particularly to the Madison Company, should base its charges to the absorption plant company for the gathering service that it performs in relation to this gas?

A Yes. The most scientific basis of making those charges, in my opinion, would be on a demand and commodity basis. By that I mean I would allocate costs of the gathering system on a demand and commodity basis. Having found the unit demand cost and the unit commodity cost, I would then determine the various classes of customer or uses and their responsibility for that demand, and, similarly, for the various classes of uses or customers the MCF or volume that they are responsible for of the total. I would then apply the unit demand cost and the unit commodity cost to those respective demands and volumes to obtain the cost for those respective uses or customers.

Q MR.HARVIE: May I just interject one question? I see in your evidence previously, Mr. Zinder, that you use the words "demand and volumetric basis", is that the same thing?

MR. CHAMBERS: I was just going to ask that, Mr. Harvie.

A THE WITNESS: I use demand and volumetric costs as being synonymous in my terminology.

Q The term "demand and volumetric costs" is synonymous in your terminology?

A Yes.

Q They are synonymous?

A Yes. I use them interchangeably.

Q Now, Mr.Zinder, I get your idea, but I do not just follow it through when you talk about the demand of costs. How do you apply that to this?

A Well the gathering system has a certain capacity. That capacity has been initially determined based upon the service expected to be rendered, the maximum volume to go through that line. That maximum volume, generally on a daily basis, is the total demand that that gathering system or line can carry. Now, usually the size of the line is determined by the peak demand expected on the system. During the time of that peak, certain uses or customers are using that capacity, and I would distribute them, the total demand costs, in proportion to their use of that capacity at the time of the peak.

Q Did you have anything to do when you were with the Federal Power Commission with the regulation hearing or the regulatory hearing of that body in connection with one of the companies, the Colorado Interstate, and there was the Canadian River and the Panhandle, did you ever have anything to do with those?

A Yes, I assisted and supervised the preparation of certain evidence that was introduced at that hearing.

Q It is my understanding that under the Natural Gas Act of the United States that the Federal Power Commission, being a Federal body created by Federal statute, had authority to regulate inter-state operations of gas, is that right?

A Inter-state operations or the sale for re-sale of natural gas.

Q And then under the State statutes that you have down in that country, the State bodies have to do with the regulation of gas and other utilities, gas companies and other utilities that operate inter-state, is that the term you use?

A Intra.

Q Intra?

A Yes.

Q Is that, by and large, right?

A Most states operate intra-state with the gas companies.

Q And it is my understanding in this Colorado case that there were certain facilities, certain facilities with regard to the gathering and so on, that supplies gas for both inter-state operation and intra-state operation, is that right?

A That is right, inter- and intra-state.

Q And that during the course of that hearing the Commission was confronted with the fixing or allocation of costs or value of service or something of that nature as between those two kinds of operations?

A It did, yes.

Q And that then that decision was appealed and finally was dealt with by the United States Supreme Court in the Colorado Interstate Gas Company vs. the Federal Power Commission, and the Canadian River Gas Company vs. the Federal Power Commis-

sion and it is reported in 1945, 58 Public Utility Reports, New Series at page 65. Now, the United States Supreme Court, as I understood, upheld the Federal Power Commission, you know that?

A Yes.

Q And one of the matters up for discussion was the basis upon which they allocated those costs?

A Yes.

Q Now, can you tell for the purposes of the record the basis upon which they did allocate the costs, do you recall?

A Yes, I do.

Q Yes?

A The costs were allocated.....

MR. STEER: Mr. Chairman, may I ask whether the witness is giving this answer based on the record of this case or whether he is giving the answer by knowledge of what occurred in the deliberations of the Commission?

MR. CHAMBERS: He told us, I think, that he was personally concerned in that case, and I am asking him on what basis the Federal Power Commission did that. I am prepared to put the report in.

THE CHAIRMAN: Well, if their allocation was the same as his recommendation as to the allocation, then I think the evidence is proper.

MR. CHAMBERS: How does the method that you recommend compare with what the Commission did in that case?

MR. STEER: I do not understand, Mr. Chairman, that this witness did make the recommendation entirely.

MR. CHAMBERS: I am talking about the recommendation here.

MR. STEER: I take it he had some part in the preparation of the submissions. Now if this witness is going to say that he recommended how these costs should be allocated and that the Federal Power Commission adopted his recommendation, that is one thing. If he is prepared to say that, then of course I would be very interested in hearing it.

THE CHAIRMAN: That is just exactly what I said, Mr. Steer.

MR. STEER: He has not said that yet.

WITNESS: I will be glad to state my part in that case.

Q MR. CHAMBERS: Go ahead?

A The cost allocation in that case was prepared partially under my supervision. I say partially because before it was permitted to be used and submitted, it cleared my desk, putting it that way. It had passed my approval or had my approval. It was not done entirely under my supervision because the individual, Mr. William H. Lyons, who introduced the exhibit and testified on it, was at that time in the Engineering Bureau, as it was called, which was separate from our division. Shortly, subsequent to that that Engineering Division was transferred to my division. The principles adopted and used in Mr. Lyons' exhibit were those which I approved and considered reasonable and proper.

(Go to page 4218).

As far as I can recollect . . . . .

MR. STEER: If we are proposing to show what was done, I have a further suggestion to make, sir. First of all I am not satisfied, you may be but I am not satisfied that this witness did prepare that submission and I would suggest that if evidence is going to be given of this character that we ought to have the document.

MR. CHAMBERS: Well all I can say is this, if this Board is going to adopt technical rules of evidence at this stage I think we should all know about it, and then we can all act in accordance. But the question I am putting to this witness is no wider and no farther afield than other questions that have been put to witnesses who have been put in this box.

THE CHAIRMAN: Mr. Chambers, he can give evidence of of the allocation of costs which passed his desk and then we can read the judgment for ourselves.

MR. CHAMBERS: I am only referring to it for the purpose of discussion, because I think the discussion at least will be helpful.

THE CHAIRMAN: What I really meant to say was that after having heard the evidence, we can find out from the judgment itself the extent to which the Commission applied his formula or allocation.

MR. CHAMBERS: I will not pursue that matter further because I think I have accomplished my purpose in other cases.

Q Mr. Zinder, as I understand it, this matter of the application of what I am going to call it, the volumetric method, to peak load demands rather than just taking the volume over the whole year, or a period, is based on the fact that in your

opinion at least peak load represents the capacity, the extra capacity by way of capital investment that is required to take care of certain customers.

A That is right. The peak load expected of any system is generally the determining factor as to the size of that system, which in turn determines the investment and therefore it can be said that the investment is generally proportional to the peak load.

Q Now then let us apply that to this situation we are talking about in Turner Valley. As I understand it, the peak load or maximum demand of the system is caused by the burners in the City of Calgary and other parts of the Gas Company's system. Would that be a fair way to put it?

A Yes. I do not know the exact facts there.

Q I am asking you to assume that.

A Yes.

Q You would not be surprised if my assumption is probably correct?

A Well I do not know, Mr. Chambers.

Q Now then, if the absorption plant load has to fluctuate with the gas market demand, the gas gathering system of the gathering company would have to be designed primarily to take care of the market peak load.

A That is right.

Q If they are going to supply the peak load.

A Yes.

Q I am also suggesting to you that the gasoline plant itself would also have to be designed with sufficient capacity to handle those peak load volumes, assuming that it is necessary to take the gasoline out of the gas gathered

to make it fit for market.

A I would assume that to be so.

THE CHAIRMAN: Do you not think you should put to the witness this, that the gas gathering system leading to the absorption plant was not designed to carry the peak load or peak requirement.

MR. CHAMBERS: I think, sir, the evidence is just the opposite to that.

THE CHAIRMAN: Then why did you have so many flares?

MR. CHAMBERS: In view of Mr. Stevens-Guille's evidence and there has been no evidence called here to contradict it. In any case, I am asking to put it to him as an assumption.

THE CHAIRMAN: Quite so.

MR. CHAMBERS: Mr. Stevens-Guille's evidence on the record is to that effect and has not been contradicted. Some people have made a lot of insinuations in the witness box, and counsel have attempted to do so.

THE CHAIRMAN: At the same time I think you should also put that assumption to him.

A I was taking these statements as assumptions to be used in submitting the principles that would apply.

Q MR. CHAMBERS: If the assumptions are not so, you are not bound by or you do not intend that your answers should apply unless the assumptions apply.

A That is right, Mr. Chambers.

MR. BLANCHARD: I did not hear the question and the answer before the discussion.

(BY THE REPORTER READING): "Q. I am also suggesting to you that the gasoline plant itself would also have to be designed with sufficient capacity to handle those peak

load volumes; assuming that it is necessary to take the gasoline out of the gas gathered to make it fit for market.

A. I would assume that to be so."

Q THE CHAIRMAN: Would have to be designed.

MR. CHAMBERS: Yes, would have to be. There might be half a dozen other reasons but I say in order to meet this situation it must be designed that way.

THE CHAIRMAN: If you were building a new one, that is the basis on which you would design it?

MR. CHAMBERS: Yes.

THE CHAIRMAN: All right, go ahead then.

Q MR. CHAMBERS: Now I am going also, for the purpose of our next discussion, to refer you to another matter that is already on the record. Volume 12 of the transcript, dated March 20th, 1945, pages 939 and 940. I am reading from the evidence of Ralph E. Davis, who was called by the Gas Company, in response to certain questions that I put to him:

"Q. Mr. Davis, is it not true that the Royalite Absorption Plant would have had the same connected supply whether this system of conservation had been put in or not?

A. Well, I wish to answer the question - when we are talking about this system, I do not know whether you mean this system of conservation as recently ordered by this Board.

Q. Yes.

A. You mean to say that the Royalite Plant would have had the same gas throughput connected to it after Royalite decided to make certain extensions in the field within the last year and a half.

Q. Yes.

A. Now you ask me would it not have the same connected

"gas delivery as it will have under this system.

Q. Yes. Substantially. Wet gas I am talking about.

A. Well it would be getting the G.O.P. gas.

Q. It is not getting the G.O.P. wet gas now, I mean under this system as I understand it.

A. Well the G.O.P. gas comes to you.

Q. I am talking about the absorption plant, about wet gas.

A. Oh you are talking about the wet gas?

Q. Yes.

A. Not dry gas?

Q. No.

A. So far as the wet gas is concerned, I believe the answer to your question is 'yes'."

I am asking you to assume that is so for the moment.

A All right.

Q And I am asking you to assume that the absorption plant will operate for the purpose of taking gasoline out of the wet gas gathered so long as the Madison system supplies gas to the market. I ask you to take those two assumptions. I am suggesting to you that it would be fair to allocate those costs in total as between the absorption plant and other customers based on the peak; that that would be a fair proposition.

A I would allocate the demand costs in proportion to the responsibility for the peak, yes.

Q Now then, assuming that the absorption plant says, "We are quite prepared or content to go further and allocate them on a straight volumetric basis. Leave out the peak, we are prepared to pay our average per mcf proportion of all

"the cost, that is whether the costs are due to the peak or otherwise."

What would you say to that basis as compared with the one you have just outlined?

A On the basis of a straight mcf allocation, that customer would be receiving or absorbing more than a proper share of the costs if he had no responsibility for the peak or if his responsibility for the peak was less than average, I would say.

(Go to page 4224)

Q Now I want to draw your attention to another phase altogether and I am going to refer you again to, or read to you, from Volume 12 of the transcript at Pages 942 and 943, - again from the evidence of Mr. Ralph Davis in response to certain questions I put to him:

"Q Mr. Davis, my understanding is that it is not an uncommon practice in the States that gas companies supplying cities or urban centres consistently carry as part of their rate base or part of their expenditures, which is added into the comsuner's rate, costs for keeping the gas reserves available, undeveloped fields. In other words, it is common through the consumers' rate to pay something to insure a supply of gas a number of years ahead ?

A Yes, and I have always been an advocate of that scheme."

Now then what has your experience been in that regard ?

A I agree with Mr. Davis' testimony that, and it has been my experience, that the costs of proven but undeveloped acreage and costs of exploration and development and similar costs, to assure an adequate supply, have been allowed in expenses and in the investment.

Now I am assuming now of course that they are all reasonable costs, that is the amounts are reasonable and proven.

Q Now as I understand it, there was some discussion with you on Tuesday about the shrinkage of the market due to increased rates, I think Mr. Fenerty raised that, do you recall that ?

A Yes, if you are referring to the "vicious circle argument" which he termed it.

Q I was not here but I gathered that.

A Yes.

Q Now I am asking you to assume this, that the situation in Calgary prior to January 1st, 1944, was such that the Gas Company under its then prevailing rates, immediately prior to January 1st, 1944, under its then prevailing rates schedule, has practically all of the available gas business in Calgary, in other words, they had all homes connected on their distribution system and they had practically all the business blocks and it had a large, had by far the greatest part of the industrial business in Calgary, and I am also asking you to assume that since January 1st, 1944 there have been a lot of houses that have been built on streets which are served by the gas distribution system and I am also asking you to assume that as at the 1st of January 1944 there was a two cent reduction in not all, but practically all, the consumer business, domestic consumer business, - now assuming those things are correct, what would your view as an expert in those matters be, if the rate in force immediately prior to the 1st of January 1944 were restored, assuming that there is no other factor involved ?

A Let me see if I get your assumption correct, in making my answer or giving my answer, - assuming under a certain rate a completely one hundred percent saturated domestic market, I am assuming now - -

Q I am not saying one hundred percent but I say it is over ninety percent and I am asking you to assume that ?

A All right, all right. We will say "substantially saturated as high as ninety percent" .

Q Yes.

A A two cent rate reduction is made.

Q Yes.

A To that class of consumer.

Q Yes.

A And then a year later the original rates are restored.

Q Well not a year later but two years later.

A Two years later the original rates are restored.

Q Yes and I put in, although I do not know if it is of any moment to you or not, since January 1st, 1944 a lot more houses have been erected, and I ask you also to assume that practically all of the houses in Calgary on streets where there is gas, use gas ?

A Yes. I would not expect much change in the use of gas under those circumstances. I have not made a market study of the class of the customers and their incomes and so forth. You would find perhaps some customers would go off but I would be surprised if there would be many and you might find some customers who are right at the margin, perhaps watching their gas bills closer, that is my opinion.

Q THE CHAIRMAN: And one other thing, there would be an extremely loud vocal protest for a week or two from all customers ?

A There would be a protest, Mr. Chairman, to any increase in rates.

Q MR. CHAMBERS: You do not suggest the rate should be fixed on the basis of protest ?

A I would not suggest it, Mr. Chambers.

MR. STEER: That would depend upon how loud and how long.

THE CHAIRMAN: We would have rate changes every month if

the changes were made on that basis.

Q MR. CHAMBERS: Yes. Now I just want to talk to you for a moment about "cash working capital" and my understanding is that the Federal Power Commission uses as a basis for allocating or deciding upon the amount of cash working capital, one-eighth, or 45/365ths of the estimated operating expenses of the year ?

A Yes, less the costs of purchased gas. For general purposes and for actually determining the rate informally, where they are or have been reached by agreement, the recognized way that the staff have uniformly used has been one-eighth of the operating expenses less the cost of purchased gas. In formal investigations of course a study is usually made of the cash requirements of the company but taking those studies which have been made in the formal investigations, we find that this general rule is reasonable. It usually is about that much and that is what we have used on the staff on reaching agreements on rates with companies on an informal basis.

MR. CHAMBERS: I have one more feature to open up, sir, that I do not want to break after I start on it and I would be obliged if you would take your recess now.

THE CHAIRMAN: All right, we will adjourn now.

(A short recess was here taken)

MR. CHAMBERS: If the Chairman pleases, if Mr. Blanchard can finish this morning I have no objection to him going ahead. However I am prepared to go ahead and if Mr. Blanchard goes ahead it seems we might finish this afternoon so far as I am concerned.

THE CHAIRMAN: Well would anyone have any objection to

sitting this afternoon in order to try and finish this phase of Mr. Zinder's evidence, subject of course to the right of resuming cross-examination if you wish when he comes back again.

MR. HARVIE: That is if Mr. Blanchard finishes his now.

THE CHAIRMAN: Yes, and then Mr. Chambers can finish his.

MR. HARVIE: I do not think it is going to take me as long as I anticipated, my questions have been considerably curtailed.

THE CHAIRMAN: If we sit this afternoon we had better adjourn at 12.30 and start at 2 o'clock, is that agreeable to everyone? Very well we will do that, Mr. Blanchard?

CROSS-EXAMINATION BY MR. BLANCHARD:

Q Mr. Zinder, I am going to first see if we can crystalize your opinion as to the basis of fixing the well head price, in a few short propositions; now I will put them to you and you can agree with them or qualify them as you see fit ?

A All right.

Q And the first is that the producer of a useful commodity for which there is a demand is entitled to a fair price ?

A I would say "yes".

Q You would say "yes" to that ?

A Yes.

Q And secondly, that under regulations so long as the burner-tip price of gas is lower than the price of other types of fuel presently being furnished, the price of gas cannot be considered to be unfair providing such price does not result in an undue profit to the primary producer in relation to his investment ?

A I would say "yes", Mr. Blanchard, with one qualification.

Q And perhaps I am coming to that.

A All right.

Q And the third, that under regulation the well head price to be fixed by this Board must not be at such a figure as when passed on to the ultimate consumer , will result in impairment of the revenue required to return the investment of the operators in the field and the retail distributors, together with a fair rate of return on their investment.

A May I ask the reporter to read that again so that I will have it in mind.

(Reporter reading) "Q And the third, that under regulation the well head price to be fixed by this Board must not be at such a figure as when passed on to the ultimate consumer , will result in impairment of the revenue required to return the investment of the operators in the field and the retail distributors, together with a fair rate of return on their investment".

MR. BLANCHARD: That is really a limitation on my second proposition ?

A Yes. I would say "yes" with one qualification, to the producers that are in there, then the relationship of the revenue to the cost of service, and cost is something which is almost impossible to determine I would think, it would have to be the value of the service in my opinion at that point. The cost of taking that value of service and adding your other costs, I would say "yes".

Q I see. Now let us assume that a well head price is fixed by this Board that will have the effect of raising the price to the domestic consumer by 25%, let us assume that ?

A All right.

Q Is it your opinion that a substantial part of that increase could be offset and would be offset by the more economical use of gas by consumers ?

A That assumption Mr. Blanchard, that increase is passed on to the consumers that you are assuming that would have to be so. I have not completed study as to the relationship between the cost of gas in Calgary and competitive alternative substitutes, particularly for heating. If you have a 25% increase in retail rates I could not say as to whether or not that would get above that level.

Q Well let us assume it is not above that level ?

A All right.

Q Let us assume it is not above that level ?

A I would assume that you would get a certain amount of diminution of use. Generally speaking the customer is going to keep his house comfortable. The customers on a margin, that margin being where it is difficult for them to maintain or to take care of their expenses would certainly try to cut down by the full amount. You would find others cutting down less and probably a substantial part making no change, simply paying more for the gas and keeping their houses comfortable.

Q Well is it not true as a general proposition that a low price for gas results in a certain amount of wasteful use ?

A Wasteful in the sense that -

Q The householder does not use the same care. Does not use the best appliances for saving gas and so on ?

A I would agree with that wastefulness in the sense.

Q Has it been your experience that where the price of gas has been raised to domestic consumers that the gas bills do not

increase in the same proportion. Have you had any experience or have you made any study of that at all ?

A I do not recall any studies that I have made of that particular situation, Mr. Blanchard.

Q If that is true, I mean to say if the increase in price will be offset by more economical use of gas then the revenue of the Gas Company will not be impaired and there will be a certain amount of conservation of gas in consequence of its use ?

A That is right.

Q My learned friend Mr. Chambers was asking you about the allocation of costs to be borne or the distribution of costs between the Madison Company and the absorption company and you mentioned that you would recommend the employment of unit demand cost and unit commodity or volumetric basis ?

A That is right. The demand being in terms of that demand at the time of peak load on the system, yes.

Q Now I must confess I do not follow that through very well. Let us take a thousand cubic feet of gas that is delivered by the Madison Company into the absorption plant of Royalite. After it has been processed in the absorption plant there is left only 850 cubic feet of residue gas available to the market, residue gas market ?

A Yes.

Q That 150 cubic feet has been lost in the processing or used as fuel in the plant ?

A Yes.

Q You see now that amounts to 15% loss, actual loss of gas ?

A Yes.

Q Now do I understand your basis of allocating cost to be that the absorption plant would be charged only for the 15% that

is the actual gas used in the absorption plant as it passes through there.

A It would be allocated 15% of the volumetric or commodity cost on the system from the well head to the absorption plant, and assuming that is one continuous system there are no other services rendered off that system except going from the well head to the absorption plant and then the next stage goes from there on. That would be fifteen percent of the volumetric cost. Then the absorption plant being responsible for taking that 150 cubic feet on a basis that you have indicated.

Q Is that all the absorption plant would pay ?

A Now the second group of costs are the demand costs and it would be necessary then to have information as to when was this system delivering its peak load and determine how much gas was being delivered at that time on the peak, and determine further whether any gas was being used at that time by the absorption plant and therefore to see how much responsibility it would have for the system's peak. Now that peak is usually expressed in terms of so many cubic feet per day. That is the capacity is in terms of cubic feet or Mcf's per day. I do not know what the situation would be on the peak days, that is the relative demand between its uses.

Q Well if the plant is designed to take all the gas, to process all the gas required on a peak day - has been designed to take care of all gas what effect has that got ?

A If the absorption plant is operating at the time of the system's peak then it would get 15% of the cost demand cost up to that point.

Q Yes, all down to the absorption plant ?

A Yes, that is right.

Q Now in that event the absorption plant is paying only for the gas that is lost or the gas that is taken away from the residue market ?

A Yes, that is right.

Q Well what does it pay for the service of delivering all the other gas there that is processed. Does it pay nothing for service ?

A What service do you have in mind, Mr. Blanchard.

Q Well there is delivered to it a thousand cubic feet of gas. I am taking my example again. There is delivered to it a thousand cubic feet of gas and out of each cubic foot it takes so much gasoline and it is necessary for its operation that there be one thousand cubic feet of gas delivered to it. Now then is there no charge for that service ?

A Oh yes, the problem that you put to me was the allocation of the gathering system as I take it ?

Q Yes.

A And I am taking those costs and allocating those. Now the absorption plant would also pay I would assume a well head price in addition for such gas as it uses.

Q It will pay the producer something for the gasoline content ?

A There would be an agreement between them as to the gasoline content.

Q But what is the Madison Company, the distributor or gatherer of gas in the Valley getting for bringing in one thousand feet to the absorption plant ?

A The Madison Company is taking that gas from the well head to the absorption plant.

Q And Madison gets no part of the gasoline content you understand?

A It gets on this basis of allocation of costs, it would be

getting that 15% for that portion of the service because under this theory if I might explain and under this principle 15% of the costs of delivering that gas from the well head to the absorption plant are caused by the absorption plant.

Q Yes.

A Used.

Q You are only going to have the absorption plant pay for the gas that it loses, that does not go on to the residue market ?

A Yes.

Q And you are not making any allowance for what they should pay for the service of bringing in the other 850 feet into their plant ?

A Not on this basis, no.

Q Not on that basis ?

A No, I am treating on this basis, Mr. Blanchard, the absorption plant as being equivalent to a customer that might be served and taking so much gas out of the line. Now in a distribution system in an urban centre you may have your mains going down a street and gas is going down in the main to serve many customers and on this same basis the cost that you would allocate would be a portion of the total cost. I have not allocated in this example any amount for the 850 cubic feet. It is actually using 150, yes.

Q We can at least agree that the absorption plant should pay for the gas that is actually lost to the residue market, that is the 15% ?

A Yes.

Q Because the residue market gets none of that and it should pay a proportion of that used gas, that is the gas used by the absorption plant bears to the total that goes through the

absorption plant. Then is there not another factor. Is not Madison rendering another service in bringing 50 million cubic feet a day into the plant for processing ?

A That 50 million cubic feet a day I am assuming is the amount less the amount used in the plant and assuming further it is the amount going to the market. I would not allocate that to the absorption plant.

Q You would what ?

A I would not.

Q They get that service free of charge then do they ?

THE CHAIRMAN: As I see it, Mr. Zinder, the point Mr. Blanchard is making is that the absorption plant cannot get its 150 volume without delivery of the whole thousand. Mr. Blanchard's point is not only should they pay the 15% for the volume that they use b t they should also pay something for that other 850 without which they could not have got the 15% ?

A Yes, I think I understand the situation.

THE CHAIRMAN: Did I put that correctly, Mr. Blanchard ?

MR. BLANCHARD: Yes, that is correct.

A I do not know that I can answer that offhand. I would like time to think about it a little further.

Q Is it a problem that has come before you at all ?

A No, Mr. Blanchard, not in that way. You see the problems as I have dealt with them before of the operations are utility operations. In this case the absorption plant as I understand it is not a utility.

Q Well I would like you to.

A So that we take the whole and take the service from the well head all the way to let us say the central gathering point or

all the way from the well head to the city gate .

Q Yes, I understand then you would like to give it a little more thought ?

A Yes, because offhand as to the service as to use, just a straight demand and commodity basis the way I have indicated is the only way I know to make that allocation of costs. Now with regard to the other 850 cubic feet I would like to think about that.

Q Now when you are thinking about it I would like to put it this way to you. You are charging the absorption plant on the same basis you said as another customer. You mean the ordinary customer who uses so much gas ?

A Yes.

Q In other words let us assume there is a foundry located somewhere in Turner Valley that uses 150 cubic feet of gas. I am still thinking of my small example.

A Yes.

(Go to Page 4237)

Q You would charge that foundry for the 150 cubic feet of gas it used, because that is all that was delivered to it?

A Yes.

Q Now that is no analogy to the case of an absorption plant that receives a thousand cubic feet of gas for its purposes, is it?

A Well, it receives a thousand, but I was making the analogy with the 850 as going all the way through.

Q That may be?

A And its use of only 150.

Q It may be, it takes 150 away, but it receives a service in the delivery of the rest, that is the basis I want you to look at it?

A All right.

Q Now, some questions were asked you by Mr. Steer relating to whether the same well head price should be paid to the owners of low pressure wells as the price paid for gas to high pressure wells. I think you remember his asking you some questions?

A Yes, I do.

Q Now, let us suppose that the Gas Company was an entirely free agent and went into Turner Valley for the purpose of buying gas, and laying its pipelines to the well heads of each producer from whom it bought gas, you see?

A Yes.

Q Now then, do you think it would be justified in paying as much for low pressure gas as for high pressure gas?

A Could I have the question again read to me?

BY THE REPORTER READING: "Q. Now then, do you think it would be justified in paying as much for low pressure gas as for high pressure gas?"

A You are speaking now.....

Q MR.BLANCHARD: At the wellhead?

A At the well head?

Q I am speaking in a free market where the Gas Company goes in, leaving out intermediaries such as Madison and so on, the Gas Company simply goes into the Turner Valley field to buy gas from well owners in Turner Valley. Some of them have high pressure gas requiring no compression, in can go into the Gas Company's lines right up to the wells without compression and so on, and there is another class of wells in another part of the field that are low pressure wells that require compression to put it into the lines?

A Yes.

Q Now, could you conceive the Gas Company paying as much to the low pressure owner as to the high?

A Yes.

Q On what basis?

A That the cost which is a factor in value, as I have stated, in my opinion, that the cost of developing that low pressure gas might have been more, and if it were more that producer would expect to get perhaps an equal amount. In other words, that might offset that difference.

Q But surely you cannot compel or ask the Gas Company to pay a higher price for low pressure gas than it does for high pressure gas?

A If the Gas Company needs that gas and could get it only by paying the price that the owner said he wanted, under those circumstances you, in a free market, might get that bargaining situation.

Q I see.

A For example, I have read into the record yesterday, I believe, some prices paid in the field, in a single field, that varied within some limits. Now the conditions there may be or even narrow limits, may vary, well from around 4 to 6 cents, some of those figures, I believe, were that I read. Under bargaining situations, free bargaining, you might get differences of that kind.

Q THE CHAIRMAN: Supposing we put the same question in another way, Mr. Zinder?

A Yes.

Q Taking Mr. Blanchard's assumption but in this case the Gas Company says "I will take delivery of all the gas you can give me at a pressure of 300 pounds, and I will pay x cents per MCF delivered at a point of 300 pounds pressure", and there are a number of high pressure wells and a number of low pressure wells, and they deliver at that price and at that pressure?

A Yes.

Q Will the net result to the low pressure wells be the same as to the high pressure wells, that is putting Mr. Blanchard's question in reverse?

A No, it will not be.

Q Why should it be different to Mr. Blanchard's question than to mine?

A Well, under yours, Mr. Chairman, there is the assumption that the low pressure well owner has agreed to deliver at that price and at that point. I am saying that that would result if the low pressure well owner would be willing to deliver at that price.

Q Yes?

A And on the other hand, I think equally well, as Mr. Blanchard

stated, if the market needed that gas and that well owner asked for a higher price, I would assume you would get a bargain price that might not reflect that difference in cost.

Q MR. BLANCHARD: Under regulation, do you think that the difference should be recognized?

A I am recommending, Mr. Blanchard, or not recommending.....

MR. STEER: Advocating.

A I am recommending that, I think serious consideration should be given, or might well be given to a uniform well head price in Turner Valley field, for both low pressure and high pressures wells.

Q MR.BLANCHARD: Notwithstanding it would cost the consumer a great deal more to get low pressure gas than the high pressure, assuming that?

A Well, if you assume that it costs more, I say there are many variations in cost in one field. There are not only differences in gathering costs, differences in drilling, and differences in output of wells, and those differences are so wide, if you go down to a cost basis, you go down to an individual basis, and you will have to set a price for possibly individual wells.

Q I am just taking this as a general proposition?

A Yes.

Q If there are 20 wells and the purchaser has to go to a great deal more expense to get the gas from 5 of those wells than he does for the other 15, that that should be adjusted in the price that the producer receives?

A Well, my answer would be the same, Mr.Blanchard, and I say this, that that is not - I do not believe that my amswer is far-fetched in any sense. It depends upon what you want to

take as a unit. For example, in any distribution system, let us say one like the City of Calgary, you have one rate for domestic customers. Now, the cost to your domestic customers may vary materially. Take a domestic customer in an apartment house as against one where they live on wide lots and have big homes, the consumption might conceivably be the same, yet you have one price and the cost is considerably different. Now, what would be the best unit or area to take? I am suggesting the entire field. There might be other possibilities. It is all an averaging process in rate-making, particularly on a retail base, and I think it applies equally when you are dealing with the producers in the field.

Q Let us assume that there is ample gas reserves in the Valley.

A There is what?

Q Let us assume that there is ample gas reserves in the Valley to meet peak loads in the high pressure area without using low pressure gas at all?

A Yes.

Q Under those conditions would you not expect a purchaser of gas for distribution to bother with the low pressure wells?

A I might, Mr. Blanchard.

Q If he could get it at a price?

A Well at what price? I would not want to say offhand at what price. He might even at the same price. Now, he may have ample deliverability now but he wants to maintain that production for a margin of safety, and if he feels it is worth it to him, that may be his future supply, he might do it. I am simply indicating the possibilities.

Q I see, yes. Well, why put in very expensive installations now if that future supply is not required for a period, let us say of 15 years?

A Well, to put in a supply now, that is to put in an investment now?

Q Yes?

A You are speaking now of gathering lines and things of that kind?

Q And compressors?

A 15 years in advance would seem to me to be unnecessary as long as they protected the reserves. But you might want it for other purposes other than for that, a margin of safety and things of that kind. Then it would have some usefulness I can see that. But if it is not necessary for any purpose for 15 years, that is another matter.

Q Then there would be no justification in putting the installations there for the purpose of serving the residue market?

A That had no purpose whatsoever for 15 years, why then I would question certainly whether the investment ought to be put in.

Q Yes. For the time being in any event?

A Yes.

Q THE CHAIRMAN: So that it gets down to this, that unit operation means some person is subsidizing someone else?

A Yes, up to a certain extent, Mr. Chairman, that is the averaging process of unit operations.

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VOLUME 54.

November 15th, 1945.

WITNESSES

E X H I B I T S

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Q I believe you said, Mr. Zinder, yesterday, correct me if I am wrong, that if it was shown that the absorption plant operator and the producer and that the Gas Company received any benefit from the repressuring of gas, that if those benefits could be ascertained they should bear a part of the cost of repressuring. Is that your conclusion?

A I think I said that, yes, and that is my conclusion.

MR. BLANCHARD: I do not think I have anything more at the present time, sir.

MR. STEER: When I was talking on that point, I was talking about conservation and not repressuring, but I suppose the answer to that is the same.

A I would say in my opinion, Mr. Steer, I was thinking in terms of conserved gas and repressured gas, yes, it is the same.

CROSS-EXAMINATION OF THE SAME WITNESS BY MR. FENERTY.

Q There is one question I would like to ask, if I may, while it is fresh in our minds. About this volumetric method of proportioning costs of the dual operation in gathering lines, as I understand it the basis of the submission to the Board in relation to the price of gas and what is a fair price, you have proceeded on the basis of value - values in the gas - that is the whole basis of your brief and I am just wondering why, when you are going to determine values of the gas and you come to one of the elements that makes up the value of that gas, that is the cost of dividing the operation of transmitting the gas over those lines to the absorption plant that you at once discard value units, the value test on that and proceed to the volumetric basis. When you are going to get the values of gas, why don't you

get the values of the gas that is transported and used, to carry the analogy right through?

A Yes. For purposes of determining cost or determinging the price at the well head, I am recommending value because I think cost is very difficult, if not impossible, to determine. As I stated in my direct testimony, in setting prices you are setting prices for the future. You are trying to estimate expenses and costs for the future; what will it cost to maintain the supply and what will it cost to find a gas well and drill it successfully. In other words, there is no relationship between the, determinable relationship between the amount of the investment and the amount of gas you will get from a gas well. In trying to get the cost it will vary so we set up a basis of values, being in my opinion the maximum you can set or the only basis I can see of trying to set a price at the well head. Now when it comes to gathering you see you already have your well and you should know or in most cases I think you do know what you are going to put through any gathering line. You build it a certain size to carry a certain peak load. You can estimate pretty well what your expenses are going to be of compression and operation of that gathering line and where you can determine it that way I think you ought to use costs. In all cases use costs if you can determine them to that extent.

Q If you had a situation where, on a volumetric basis the cost of transporting was greater than any possible value of what I call the residue product, the dry gas, - you see on a volumetric basis - and on that same volumetric basis the profit on the transportation of the part that was used in the absorption plant was great, would you still

say that was a proper method of apportioning costs. To show a loss, an economic loss to the dry gas and a great profit to the units taken out of it, that would still be a proper basis would it?

A In allocating costs of a utility, Mr. Fenerty, a utility operating properly such as the gathering facilities or a transmission line or a distribution system, I do not take the approach of allocating those costs on value, but what I try to determine first is how do those costs behave. What are they proportionate to. Then having divided mycosts that way then I determine who gives rise to those costs, and the customers.

Q Yes.

A And then proportion it that way.

Q What is the objection to the value method in allocating costs of transportation?

A That is not an allocation of costs as such as I know allocating costs. It seems to me that would be well an attempt to distribute costs in proportion to facts. I am thinking of the value of the service. Let us take a distribution system. If the value of the service to the distribution customers or the domestic customers is very high and is measured by a competitive level, then the fact it receives so much, you might say, would be the cost, the cost would be just that amount. I do not think that is an allocation of costs as I view it.

Q Let us assume for the moment that an absorption plant, let us assume for the moment that the absorption plant cannot get and will not operate on 15% of the volume of gas available.

A All right.

Q I suggest to you what it does use is 100%, its by-product of that, it uses the entire 100%, does that affect your theory at all?

A If it used 100% and it was the sole, let me call it customer for convenience, in case I want to, of any gas . . . . .

Q It has used 100%. The absorption plant has used 100%, because what comes out at the exit is a different thing is it not? It is called gas but it has different constituents.

A Yes.

Q Yes. Now I am going to ask you to take a rather far-fetched analogy.and I am using it because it seems to me to indicate the absurdity in that position. Suppose you were called upon to discuss the value of sawdust as fuel, we will say, in Vancouver where it is used very largely, would you proceed to allocate values, would you proceed to charge up a share of the cost of cutting the logs and transporting the lumber to the mill and then finding the volume that resulted in lumber and the volume of the sawdust that resulted and apportion it on that basis?

A You are asking me, Mr. Fenerty, how would I make an allocation where you have a by-product.

Q Let me put it this way. You have got some portion of the original product in a changed form. That is what I am talking about and just applying that same illustration. Just tell me what you say about it then.

A Well what I am trying to tell you, Mr. Fenerty, is that similarly as I told Mr. Blanchard, that I have not thought that one question through. You may be able to treat this situation in several different ways. I have been treating

it as a utility service from the well to the market.

Q Yes.

A To the burner and treating the absorption plant as a customer for 150 cubic feet of gas out of every 1000, roughly.

Q I understand you have not thought it through but your snap view on it, as you see it, is that the proposition is not sound. At the moment it looks complete nonsense to you, does it not? that that is the way you value your sawdust? I know it sounds like that to me.

A May I have the reporter read back what you suggested, in order that I can check it over as to whether it is complete nonsense?

(BY THE REPORTER READING): "Q. Yes, Now I am going to ask you to take a rather far-fetched analogy and I am using it because it seems to me to indicate the absurdity in that position. Suppose you were called upon to discuss the value of sawdust as fuel, we will say, in Vancouver where it is used very largely, would you proceed to allocate values, would you proceed to charge up a share of the cost of cutting the logs and transporting the lumber to the mill and then finding the volume that resulted in lumber and the volume of sawdust that resulted and apportion it on that basis?

A No, I would not. I do not think you can determine cost for a by-product.

Q May I add one word to that? You understand I am talking on the basis that that sawdust has a definite fuel value and heats houses in Vancouver and has a value to the householder and you still would not, is that right?

A I would not allocate cost on the basis that you have

indicated.

Q Thank you.

CROSS-EXAMINATION BY MR. CHAMBERS.

Q Mr. Zinder, I would like to follow up this question of sawdust.

THE CHAIRMAN: And I might mention that the price of it goes up steadily year by year.

Q MR. CHAMBERS: In the first place, you will assume with me, and I gather Mr. Fenerty would agree, that sawdust is not the subject matter of regulation. You were not talking about sawdust, the subject of regulation.

MR. FENERTY: I am just talking about one thing, that is discussing the value of a product and what it is worth to a consumer.

THE CHAIRMAN: Look, Mr. Fenerty, we are not going to have an argument till after all the evidence is in.

MR. STEER: Mr. Chairman, if this question is going to be investigated and I presume it is, I am going to have considerable to say about it. As I understood it, Mr. Zinder has not yet made his studies and it is assumed he will be making his studies and will be back in January to make his submission and my suggestion is we should discuss this question then and not now.

MR. CHAMBERS: Well it was the principle that I was going to ask him about. Leaving aside for the moment sawdust. Mr. Blanchard asked him to give the matter further consideration and he drew his attention to certain situations. Now frankly I intended not necessarily to have the witness answer the question now, but I wanted to draw his attention to certain things that might be taken

into consideration. I think it would be valuable for the Board and probably the witness would be in a better position when he does return for cross-examination on that phase to know that these things are going to be tested out.

THE CHAIRMAN: In other words, you take the other methods which you suggest might be proper for the allocation of costs and you want to draw those to Mr. Zinder's attention in order that he might consider them.

MR. CHAMBERS: No. He was asked by both Mr. Blanchard and in cross-examination by Mr. Fenerty the method that he recommended or used in coming to that conclusion and if he had taken into consideration these other factors and he said he had not. He said I want to give some further consideration to that. Then Mr. Blanchard said: "I would like also to ask you to keep these things in mind." Frankly, I intended him not to answer them now but to suggest certain things to him that might be pertinent.

THE CHAIRMAN: All right. It is exactly what I said.

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Q MR. CHAMBERS: But I just wanted to deal very briefly with a matter that Mr. Fenerty mentioned, about the sawdust. And, as I understand it, the question was put that, whether the witness would figure his costs on the basis of volume of the lumber, a comparison of the stacks of lumber to the sawdust, and you said you would not figure the costs in the same way, is that right?

A Mr. Fenerty asked me, as I gathered, whether I would go about making an allocation of costs for the sawmill, whether the product would be sawdust and boards of various sizes I assume and taking the sawdust as a by-product, in the same way as I would go about making an allocation of an ordinary utility property.

MR. FENERTY: No, I did not take it as a by-product. I said just "taking it as sawdust".

THE CHAIRMAN: Look, Gentlemen, we are going to stop right now and we are going back to natural gas in Turner Valley.

MR. FENERTY: I do not want to say anything more about it except I wanted the exact question.

THE CHAIRMAN: You are going back to natural gas in Turner Valley now and we are going to forget about sawdust.

MR. CHAMBERS: I am not particularly concerned about following it up but I do suggest, sir, that we are talking about theories of allocation of costs, and if Mr. Fenerty's suggestion is approved and I suggest it was . . . . .

THE CHAIRMAN: Why do you not do the same thing, with a distillery and find out as to the prices they pay for their product. Let us get back to natural gas in Turner Valley. I think we are wasting time, that is what I feel.

MR. CHAMBERS: Very well, I will not then pursue that question any further.

Q MR. CHAMBERS: Then on the question of your recommendation, which you are to give further consideration to, that the costs of the absorption plant should be based on the volume used and taken in at that plant, I would ask you to take into consideration this situation, - assuming all the gas that is gathered, physically, goes to the absorption plant and that the absorption plant should pay to the gathering system the entire costs of bringing the gas to that point, the absorption plant then takes its 15%, which I will take for illustration and so far as it is concerned, it has a product, over 85% of the gas, which it can dispose of or get rid of, and we know that that gas is of interest to and is wanted by, the citizens of Calgary and so on; now I am not suggesting that you answer this now if you are not prepared to but I am suggesting, my suggestion is, when you are talking about fair and reasonable and equity, that the absorption plant is at least entitled, in disposing of that product, to get the volumetric proportion of the gas on its outlet that it has now, as I say, if you are prepared to deal with it now, I am quite willing to have the answer. Otherwise, I am asking you to take it into consideration as a factor which we will talk about later.

A All right.

Q So far as the absorption plant operation itself is concerned, we will assume that it has, that so far as it is concerned, that there is so much gas, wet gas, available throughout the year to be treated in the absorption plant and that 15% of that is taken out by the plant; now, so far as the

operator is concerned in getting his gasoline product, I am suggesting to you that it does not make any difference to him that he takes it out 1/365th of the quantity every day of the year rather than much less than that out in the summer time and many times that amount in the winter; in other words I am suggesting that by reason of the system being designed to take care of peak loads, that that is not done primarily for the extraction of gasoline as a commercial operation, what do you say as to that?

A As to its effect on allocation, Mr. Chambers?

Q Yes, and if you do not want to deal with it now, I am prepared to let it go for the moment.

A I follow the principle that the demand costs are properly allocatable in proportion to the use made of the capacity at the time of the assumed peak load.

Q Now bear in mind.

A There . . . . .

Q Pardon me.

A Go ahead.

Q Just pardon me, bear in mind that this gasoline must be taken out before the gas is fit for the market, you understand that?

A Yes.

Q Now is your suggestion, when you talk about the peak load as the day when you fix your value for the purpose of the division of costs, - that in effect is what you are saying?

A That is right.

Q Now I am putting it to you that the absorption plant, so far as a straight proposition for extracting gasoline for resale, that that plant does not need peak load requirements,

and that therefore strictly speaking, and on the basis of a fair allocation, that it should not bear costs based on peak loads.

A Well let me consider that along with this other.

Q Yes.

A And I think I will have my opinion settled on the thing.

Q In other words, what I am suggesting is that the operating costs probably are an average proposition, but that your initial costs and carrying charges are increased due to the market requirements and not due to the absorption plant, that is a factor which I am suggesting should also be considered.

Now there was some discussion about uniform well head price and as to whether there should be the same price for gas delivered by a low pressure well connected to a low pressure system, as to other wells, and you said that, your recommendation was, for consideration, an even price throughout the field, is that right?

A That is my opinion, Mr. Chambers, yes.

Q And I think you told me earlier this morning that there is a ceiling on reasonableness?

A Yes.

Q Beyond which prices to the consumer cannot go.

A That is right.

Q You said that?

A Yes.

Q Now what I am suggesting to you, Mr. Zinder, is this, and I want to make sure whether your recommendation goes this far, that the uniform well head price really should not be adopted if it results in the utility service, and I am

referring to the Madison Company, getting less than a fair rate of return on a fair rate base and a fair operating expense, what do you say as to that?

A Well my opinion is that if, by the establishment of a well head price, you get an eventual price to the ultimate consumer that will not permit a reasonable rate of return on all the costs from the well head to the burner tip, then the problem would have to be reconsidered and some distribution made of the deficiency.

Q Now that is just the point I am coming at and I want to know where the distribution of the deficiency is going to be made.

A All right.

Q And in that regard, I assume this, I am not asking you to admit that this is so but I am asking you to assume it, that there is an utility property in the field, that was there under such circumstances before this Act was passed, and then now it comes under regulation and in accordance with the principles which you have outlined this morning, it is entitled as a matter of justice to a fair return on a fair rate base, operating expenses included; that is one of the elements in the picture and the other element is the well head price and there may be other things and also the distributing company, but what I am saying to you is this, that assuming we take the uniform well head price and we take the utility costs on top of that and you take the Gas Company's distributing cost and you end up with a rate that all parties agree is reasonable, and you have to allocate those costs, are you suggesting that the producer in the South end, who has had built under regulation repressuring installations, for instance, should get the same price as the well owner in the North end, where

there is no low pressure system, and do you also suggest that the utility company in the North end should take a cut in order to bring about that uniform price in the field at the well head.

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Q I mean if you do not want to answer it or wish to give it further thought it is all right with me ?

A I can answer it only this far Mr. Chambers. Assuming that is the case, then I am further assuming that no one link in the chain from the well head to the burner tip is operating in excess of a reasonable rate of return. Now if we assume that and then our price is too high, beyond the market, then I would say that differentiation, if it results in curing the situation, might be something that could be considered. I cannot say now. Now there are various possibilities, how is the best way to treat it, and I have not given it consideration.

Q In other words it is an open question ?

A Yes.

Q There was one thing that I was interested in and you talked about the economic units ?

A Yes.

Q In this set up ?

A Yes.

Q And you instanced the case I think of the consumer in Calgary who I think you mentioned had an apartment. I will say, take a man with an eight roomed house on the north limit of the city.

A I see.

Q And the gas as you know comes in more or less from the south side, and the business section is in between, and your theory is under the Calgary rate that the fellow up on the north hill should get the same rate as the fellow down on the south side ?

A That is right.

Q Because you regard this as an economic unit that has been set up ?

A That is right. A classification of customers.

Q Suppose there is an area out west of the city, we call it the Bowness area.

A Yes.

Q An area that is not an incorporated suburb, but there is an area west of the city and very close that may decide and they persuade the Board, the Utility Board, that the gas system should be extended out to serve them. Do you suggest that the parties out there which is a much more scattered area should get the same rate as they do in the city of Calgary ?

A I can only say this, Mr. Chambers, that in my opinion it is desirable to have as wide a distribution of uniform rates - as wide an area of uniform rates - as oh I could almost say possible. Possible is not a good word, because you can go on indefinitely. I appreciate that it does, but in doing so it would be deliberately recognized as being in a sense a subsidization of the thin areas by the populated areas. Now that is with respect to rate making, because when you do have an average the thin area and remote area is likely to be above your average, that is in cost.

Q Would you say this, Mr. Zinder, that if we take a specified area as one economic area and you suggest that Turner Valley for this purpose should be one economic area ?

A Yes.

Q For the well head price ?

A Yes.

Q What would you say to this suggestion, that if that is done there should be uniform depreciation practices in that area, throughout the overall life of that area. What do you say as to that ?

A Yes, I would think that would follow, yes.

Q And when you are giving further thought to this absorption plant, here is a factor I am asking you to assume. That something might come out on with the absorption plant and I am referring to the one in the north end by reason of a plan being worked out to keep down the volume to be repressured should agree, or the plan involved that its gas cap reserves would not produce their proportionate share of the market from day to day and that its reserves in the gas cap would be the last to be produced in Turner Valley, assume that. And assume also that the gasoline content of the gas in the gas cap is of a higher percentage than the tail gas from the crude wells. Now I am suggesting that may be a factor in the whole picture as well. I mean we are talking about the benefits to the services of the absorption plant. I am not asking you to comment on it now unless you desire to do so.

A I see.

Q Now sir that concludes that one phase.

THE CHAIRMAN: We will adjourn to 2 o'clock.

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2 P.M.Session

H. ZINDER, cross-examination by Mr. Chambers continued:-

Q Mr.Zinder, I would like to discuss with you this matter of the fixing of prices of gas at the well head?

A Yes.

Q As I understand it there are regulatory authorities, or somebody in the United States at the present time concerned with that same problem, the value of the gas at the well head, is that so?

A Yes, the Federal Power Commission is concerned with the problem of fixing an equivalent of a price of gas in the field, at the well head and in the field.

Q Now, in order that you may have just a bird's-eye picture of what the problem is here, I am just going to give you one or two of the highlights of the Act in here that deals with the matter of the gas itself, and I am referring first of all, to Section 72,subsection 1 of the Statute. Have you got it there?

A I have it here.

Q And you will notice in that first part, it says:

> "The Board shall fix a just and reasonable price for natural gas as and when produced from the earth at the gas exit from the separator."

And then the proviso in effect says that that is to include the gasoline content?

A Yes.

Q And then there is Section 72(1a) which was added later, have you got that?

MR. McDONALD: No, he has not.

Q MR. CHAMBERS: But anyway it says in effect this, not-

withstanding any other provisions of this Act in fixing any just and reasonable price the Board shall not be required, and I am not reading it word for word, I am bringing out the parts that are applicable, and leaving out the parts that are not applicable, the Board shall not be required to fix the price or prices on the basis of any wells or of the value or cost thereof or the fixing therein of a return thereon, but in the fixing of such price the Board may adopt any just or reasonable basis or method of arriving at or computing such a price or prices as the Board may deem to be applicable or proper, having regard to all the circumstances and factors involved. Now, that is one of the duties this Board is confronted with?

A Yes.

Q And then there is 71, subsection 2, which says in effect that the Board has power by Order to regulate the owner or operator of a well to sell and deliver gas to the parties designated by the Board at prices fixed by it?

A Yes.

Q And then there is 71(3) that I read to you yesterday, that with the concurrence of the Conservation Board, this Natural Gas Utilities Board has power to require the gas production from the wells to be maintained; and 71(d), the Board has power to direct and order a pipe line proprietor or a scrubbing plant proprietor, to purchase and take delivery of natural gas. And then there is 72(1e), the Board has power to regulate the pipe line proprietor or the scrubbing plant proprietor to return excess gas to the formation?

A Yes.

Q And 71(5), the Board shall have the power by Order to restrict and control the wasteful use of natural gas and to eliminate

the use of natural gas for expansive power only, and then I would ask you, or I would point out to you, for the purpose of our discussion that I propose to embark on with you, that Section 3(1) of this Act makes the Chairman of the Conservation Board ex officio a member of this Board. Now, I am asking you to assume in the light of the legislation that I have read that this gas at the exit of the separator has been by the Legislature, has been made by the Legislature, subject to control of this Board, or this Board in conjunction with the Conservation Board?

A Yes.

Q Now, may I ask you to deal with this situation, or this feature, bear in mind that the control of this gas commences at the exit of the separator, what bearing, in your opinion, or what recommendation are you prepared to make with regard to this question upon the whole picture, and the question is this, the fact that that gas prior to its coming under control of the regulatory bodies, has been used or has been instrumental in lifting to the surface of the ground petroleum or oil?

A Yes.

Q But would you give us your views on that?

A As I gather your question, you are asking me what effect, in brief, the placing of these gas and oil wells under regulation has, and I have to assume one other factor and that is the value of the gas. I assume that is what you have in mind?

Q Yes, that is what I am coming to.

A Well, in my opinion, and I believe I testified about it in direct evidence, I think it is equivalent of dedicating the field and the production to the market, and, as such, I

think it adds value to the gas and is a factor in any determination of value. It is not only dedicating that gas and that acreage to the market, at the same time, of course, on the other side, it is placing certain restrictions on the producers that did not exist there before, in my understanding.

Q Now, I want to draw your attention particularly again to this function that this gas has performed prior to getting to the exit of the separator, at which point you told me that in your view it was dedicated to the market. Assuming that this gas has a thousand B.T.U. content, I do not know whether that is within the bounds of reason or not, but assuming that is the picture, is it any less or more valuable for the market than a thousand cubic feet of gas from a dry field situated in the same relative situation with a thousand B.T.U. content? Has its value been decreased by reason of having been used prior to its coming under control by reason of having performed the function in bringing oil to the surface?

A Well, I do not consider that the fact that in one case the gas has performed the function of bringing the oil to the surface alters the value of the gas, and I am speaking now particularly of the Turner Valley field. My reasons for that are that, or as I stated previously, it is the gas cap costs that are most influential or significant, I should say, in determining the cost factor to be considered in arriving at value. I make that statement because it is expected that the gas cap area will supply the majority of the gas over the life of the field for the market.

Q Now, you remember I referred you to Section 71(5), and other places that we referred to there, that the Board has power to restrict and control wasteful production of the natural gas?

A Yes.

Q Would you let us have your conception of what you understand wastage is?

A By the word "waste"?

Q I am talking of wastage, what do you understand by that?

A Essentially I would consider it being a waste of gas, if it is disposed of without making some use of its qualities. For example gas has a heating quality and it would be a waste if it were not used for that purpose. It has other qualities and characteristics, and I would consider it a waste if the various possibilities were not used. For example, flaring of the gas is certainly waste of the gas.

Q Well, assuming that it costs more to save it than you are ever going to get back, what do you say then?

A Do you mean, Mr. Chambers, whether I would recommend that you incur that cost?

Q Yes?

A Under normal circumstances I would say "No". However, unless for Governmental action it is considered that, notwithstanding that cost, it is a natural resource that should be saved, and then the problem would arise as to who is going to pay for the difference.

Q Well, I suggest to you, and I will ask you to assume that the Legislature did not say that every thousand cubic feet of gas that is in the surface of the ground in Alberta shall not be flared. What I am really suggesting is this, that the waste is a term or economic phase, and there are certain features of economics you must give attention to before you decide whether a thing has been wasted or not.

A I would not define waste in terms of economics, Mr. Chambers.

Q Economics does not enter into it at all?

A Whether you put a product to use may well depend on the economics of it, and it usually will.

Q That is what I mean?

A But if it is uneconomic, I would not say necessarily it is wasteful in the social sense. It is wasteful in the economic sense. For example, it may cost more to deliver the mail at any rural districts than the strictly economic function, that is a losing venture, but still the Government says it is a service that should be rendered and Government has taken it over.

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Q And in many cases the Government, as a matter of Government policy, subsidizes the service?

A Yes.

Q And that is one of the reasons for Governments to go into business?

A That is one of the reasons that we frequently find Governments going into business because it is uneconomical on the private enterprise phase.

Q But what I suggest to you is this, Mr. Zinder, that in the case of private enterprise or private enterprise under regulation, that when we talk of the word "waste", that it is, it must be interpreted, or we should consider it in the light of the consequences as to how much you must spend on the product.

A Yes, I think so, you ought to consider how much it would cost to save the product which was previously being wasted, or which had been previously wasted.

Q In other words let me put it to you, which might be something in the nature of Mr. Fenerty's sawdust, but I am suggesting to you this, that in this Western country, which is essentially a grain-growing country, to burn straw or chaff from the separator, now that is being burned and it is of no further use, but in the light of the circumstances as we have them that is not a waste, what do you say as to that?

A Well I do not know as I can answer that, whether I can or not, I am not familiar enough with it,

Q All right. Well then, let me put this to you, getting down to Turner Valley and in the light of this section of the Act which I just hurriedly called to your attention, you recall the Board is charged with the duty of fixing a

price of gas at the exit of the separator, it has the right to control the handling charges and it has the right to say what wells can be produced and so on, - now assuming with me that the cost of gathering and compressing and the storing of the gas, that is in excess of the immediate market requirements is, we will say, 3 cents per thousand cubic feet, and I am leaving out of the picture at the moment any value of the gas at the well, and assuming that that is the amount which someone must now pay, let me put it that way, to get the gas must now pay out in cash, to gather, compress and store gas which would otherwise be flared, you see?

A Yes.

Q And assume that that gas is to be stored for 15 years?

A Yes.

Q And assume with me that the party, - whether it is the producer or whether it is the utility gathering company, - would be entitled to 8% compound interest because, and I am saying "compound interest" and I will give you the reason why I am asking you to make that assumption, - that he is putting up his money to pay those payments; at the moment there is no place he can get a return, and I am asking you to assume therefore a basis of 8% compound interest, and I am not asking you for figures but I am asking you to assume that this is correct for the purposes of this proposition, that at the end of the 15 years that that 8% compound interest would work out at something in the neighbourhood of 10% at the end of the 15 years, and then also assume that at the end of that period the gas is reqiired to go to the market, and it still has to be scrubbed and we have assumed that somebody is going to get something for providing the storage facilities, I am not going to guess

at the amount, - now I am saying if all those figures are correct, and those statements, that that would require a price in order to reimburse the man that is putting his money up in the meantime, something in the neighbourhood of 11 or 12 cents, and assiming that the 8% is fair for the purposes of my question, now I suggest to you that, unless there is a reasonable prediction now that the man who put this money up to pay those charges is going to get that amount back, that that is not waste to allow that gas to be flared unless that results, what do you say as to that?

A I would say, Mr. Chambers, that the flaring of gas at any time is waste in the social sense.

Q That is not what I am asking you. Is that the type of waste which you are talking about in this Act?

A Well I am assuming in the Act, Mr. Chambers, that probably all forms of waste may have been considered or might be involved, but as you say, whether that is economical or not, your example is uneconomical or not, and is not a good business venture, that would be another question.

Q Then let me put this to you, that the Board or the regulatory body, in working out this problem, - would you agree with this, should be guided in its working out of the problem, as far as possible, to insure that the parties who put the money up or that perform the services, get a reasonable compensation for it, would you go that far?

A I would certainly agree with that.

Q Yes? Now taking this list of assumptions which I gave you, I suggest to you the ingredient which makes it economically unsound is the interest factor, the compound interest?

A I will assume that if you want me to.

Q No, I am saying, assume the 8% should be fair and is held to be fair?

A Yes.

Q That that is the biggest ingredient that makes that proposition economically unsound, if you cannot get ten or twelve cents for the gas at the end of the period?

A Yes.

Q That is the biggest item?

A Yes.

THE CHAIRMAN: I suppose this would be a proper factor for me to consider in determining whether the rate base should be constructed on one or other of the various methods which have been suggested?

MR. CHAMBERS: I submit, with deference, that one does not follow the other.

Q MR. CHAMBERS: Now, Mr. Zinder, taking the same, this same gas which I talked about theoretically, which you have dealt with in this other manner on the 8% proposition.....

A Yes.

Q I suggest to you that those gathering charges and compressing costs be paid currently by or through the current rate per MCF at the market, that the consumer pay it,,and that the gas be earmarked for that market, the stored gas?

A Yes.

Q That that would be a much sounder proposition, what do you say to that?

A Sounder for whom, Mr. Chambers?

Q A sounder proposition in economics, in working out the problem under a regulatory body?

A Let me see if I have the question correctly, you are suggesting

that it would be sounder to pay for that gas as it is produced.

Q I am talking now about the gathering charges and I am leaving out any price of gas at the well head?

A Let me put it, pay for the cost of gathering and repressuring that particular,gas which would otherwise be flared, to pay for it as it is produced.

Q That is right?

A And that would be sounder than putting it in the ground and paying for it at the time that it is consumed?

Q Yes?

A Or delivered to the market?

Q Yes?

A Well I do not know that there is any real difference there as to soundness, Mr. Chambers. It depends on who is taking the risk, and if the return allowed in one case includes an allowance or what the reasonable risk is, why then I would say that the two propositions are equal except in one case you find the market, let us say, before the risk, and imthe other case you find the producer bearing the risk. Now that is the way it seems to me.

Q No, but what I suggest to you, Mr. Zinder, is this, you know the price to the Gas Company is now 7¾ cents?

A Yes.

Q I suggest to you if the gathering charges are 3 cents for the gas which somebody must pay for, you admit that, the Utility Company should not pay it at the moment?

A That is right.

Q And if the Utility Company has to get it at some time from the producer or the consumer, there is nobody else is there?

A That is right.

Q Now if the producer,puts his hand in his pocket amd nowpays

3 cents to the Utility Company, he has made an investment of 3 cents?

A That is right.

Q And then it is taken down to the storage area, somebody then must pay something for the storage, whether it is small or large?

A Yes, there is some cost involved.

Q Somebody would have to put their hand in their pocket and pay that?

A That is right.

Q And to that extent they have made an investment?

A That is right.

Q And if they have made an investment you agree he is entitled to some return on his investment?

A That is right.

(Go to page 4271).

Q What I am getting at is this, assuming that the investment with interest, with a rate that is a fair rate on it at the end of the period, together with the then scrubbing costs amounts to more than the gas can be sold for.

A Oh, I did not recognize or I overlooked that assumption, if you made that previously.

Q Well I am sorry.

A I am sorry.

Q In the light of that, what would you say to the proposition?

A Well it would almost seem to me, Mr. Chambers, there is only one answer. If the consumer can make an investment now then his carrying charges . . . . . The consumer is really then not asking any carrying charges on that investment. It is really paid or spread over a large number of consumers.

MR. STEER: Except interest.

A And that would be the only way you could conserve and save that gas and get it to the market at a price that the consumer in the future could pay, as I see it. Because otherwise, under the example you have given me, the man who is putting his money into that venture is certainly going to come out with a loss, because there is no one who will pay that amount for the gas and use it.

Q MR. CHAMBERS: Then Mr. Zinder if, as you say, the gas itself at the well head has a present-day value - you added that to the 3 cent figure that I have already given you on the other assumption, the situation would be that much worse would it not?

A Worth in what sense do you mean, Mr. Chambers?

Q It would be that much more uneconomic if you are going to compel the producer to store all this gas and to pay for it,

the carrying charges over 15 years.

A Well that represents the deduction then from what has been determined as being the value of the gas.

Q You are speaking now of the value of the gas at the well?

A Yes.

Q And the producer has to pay for it. As I understand it, you have told me or told my learned friend that the fact the Legislature in the public interest saw fit to pass this statute that in itself gives a present-day value to the gas at the exit of the separator. That is your proposition is it not?

A Let me try to state it a little more fully as I recall it. The fact that the Legislature now has passed this Act which means that gas that was previously flared will be saved for the market and will eventually, we expect, go to the market, gives a value to the gas that was previously flared. That is my position.

Q A present-day value?

A Yes.

Q That is the gas itself, the 1000 cubic feet of gas at the exit of the separator has a value, an intrinsic value?

A That is right.

Q MR. STEER: Do you mean intrinsic or market?

A Well let us deal with market value. It has a market value.

Q MR. CHAMBERS: Well now all that gas cannot be consumed by the market at the present time?

A That is right.

Q What are you going to do with the gas, remembering from reading the Act you understand it is contemplated it has to be put somewhere in the ground has it not?

A I think my answer to the question as to who is going to pay the added cost of conserving and repressuring the gas was that in my opinion it ought to be paid by those who would benefit by that action.

Q And the parties who would benefit by that action would be whom? Who is it being saved for?

A Well one of the parties benefitted by that action are the consumers. Now I have not made a study as to all the benefits that might accrue to the various parties by repressuring and conserving the gas.

Q Do you know this, have you had any experience in this, that utility companies in the States and it is a common practice for them to be allowed, as part of their operating expense, delayed rentals that they pay on their acreage?

A Yes.

Q Their reserve acreage?

A That is right.

Q And there are also cases of utility companies that charge their consumers through current rates their expenses for storage, is that right?

A Yes.

Q And they also have in their expenses and that are charged to current rates, geological expenses, did you ever run across those items?

A Yes.

Q And it would not surprise you to know that the same thing has been done by Boards up in this country.

A It would not surprise me, no.

Q I suggest to you, Mr. Zinder, that those costs of gathering and storing the gas for future use are in much the same

category as delayed rentals and storage charges and geological expenses in the United States, that have been added into the current rates.

A I think there is a similarity, yes.

Q Well, what is the reason behind the regulatory board in the United States allowing delayed rentals and so on in the current rates? What is the philosophy behind that?

A The philosophy behind it, so far as I know, Mr. Chambers, is that here is a service which was being rendered and all reasonable costs in rendering that service are a proper charge to the consumer.

Q Yes but my friend Mr. Fenerty will put to you, and I am putting it to you too, that the consumer that is here today may not be here 15 years from now. What about that?

A Well I have not seen where items of that kind are attempted to be put over into the future. There is a category of plants - called Plant Held for Future Use in the accounting classification of the Federal Power Commission and most States' Commissions. But the items that you were speaking of like proved and unoperated acreage that might not be drilled for some years and delayed rental of acreage that might not be drilled for some years are allowed as current items.

Q Mr. Zinder, that is the very point I suggest to you, that that is one of the reasons that matters of this kind are dealt with in the public interest. That it is not what this individual is going to get out of it or the next one. I think we brought this out yesterday. It is what is in the public interest as between not only the people of today, all those who are here today and here tomorrow and here the

next day after. That is part of the philosophy of public regulation.

A I would say yes. That is part of the philosophy is to provide continued public service.

Q And one of the great problems, as I understand it, that have confronted regulatory Boards in the United States in recent years, is the difficulty or the practical difficulty of fixing a well head price on gas on ordinary public utility principles. That is one of the problems they had down there is it not?

A I would consider that is a problem that they have, yes.

Q In other words, you told me this morning the ordinary rule in public utility regulations you get the cost and that is where the trouble has come and the difficulty comes in in ascertaining a uniform cost for the production of gas.

A That is right. Particularly trying to make any reasonable prediction of future costs because prices are being set on the basis of expected costs and revenues.

Q Mr. Zinder, as far back as, I think it was in the last century anyway this question of the value of service was discussed, even before we heard of public utility Boards. I am reading this short statement from the judgment of Lord Selborne in the Canada Southern Railway Company vs. the International Bridge Company, Law Reports, 8 Appeal Cases, page 23. The matter came up in this way. There was a bridge across the St. Lawrence River constructed by a company which was created by a statute and given statutory power to charge tolls. The statute said they had to charge reasonable tolls. There was a dispute

arose as to whether the tolls were reasonable or not and this is what his Lordship says:

"It certainly appears to their Lordships that the principle must be when reasonableness comes in question not what profit it might be reasonable for the company to make but what it is reasonable to charge to the person who is charged. That is the only thing he is concerned with."

Now I am asking you to consider that statement as to whether you think you can throw any light or afford us any ideas in approaching this new and difficult problem where a rate base, the operating costs cannot as you have said very well be used. What do you say as to that? Can you give us any ideas or any suggestions?

A Well the only idea it seems to me that is carried in there is that the price must be reasonable and if - and incidentally I am assuming that if not in the language of the statute it is in a sense a requirement of the statute that the price be reasonable for the Board to fix and to see that they are that anyway. I do not know that that throws much light on the subject. It might throw some light on the subject, that is if it is interpreted as being to set a ceiling as to what the price might be and that is the value of the service to the ultimate consumer.

Q Let me suggest this to you and I am not asking you to commit yourself now, because you are coming back and the matter you are coming back on will work into this.

A Yes.

Q As one reasonable approach at least to be considered that is a test of reasonableness, you find out what is the competitive price at the burner tip in the city of Calgary of gas you see ?

A Yes.

Q And you then ascertain the cost. In this case, the utility cost and a just and reasonable cost of bringing that product to the market, and by deducting those you then get the F.O.B. price or value of the gas at the well head,at the exit of the separator tip. Now you might say that might be too high because you might have taken the top price in Calgary. Do you think that would be worth while as an approach ?

A I certainly think so.

Q Just a word and I am through. Do you read the Petroleum Engineer ? Do you know there is such a magazine ?

A I do.

Q And I think you mentioned yesterday or the first day you were in the box about the Chairman of the State Commission of Kansas or a Richard B. McEntire ?

A That is right.

Q I have in my hand an extract or article from the Petroleum Engineer Annual of 1945 and it is headed: "Effect of Recent Supreme Court Decisions Upon the Production and Conservation of Natural Gas" by Richard B. McEntire, Chairman State Corporation Commission of Kansas ?

A I see.

Q Now in this he is dealing with the effect of the Hope case and this Canadian River case and so on and the problem of value of the gas at the well head.

A Yes.

Q And he refers to Mr. Justice Jackson's dissenting judgment. Do

you remember Mr. Justice Jackson dissented in the Hope case ?

A Yes.

Q And I really mention this for the purpose of something else to refer to later and as to a method of dealing with this problem and Mr. McEntire says this:

"The substance of his position would seem to be summed up in these words, 'We are confronted with regulation of a unique type of enterprise which I think requires considered rejection of much conventional utility doctrine and adoption of concepts of 'just and reasonable' rates and practices and of the 'public interest' that will take account of peculiarities of the business."

He is quoting from Mr. Justice Jackson, and:

"He then proceeds to go into the details of the problem at considerable length. He points out the fact that the prudent investment theory usually works well because it fixes rates with relationship to the amount of investment but points out there is no such relationship between investment and the amount of gas produced, using an example, and I shall again quote him for the sake of clarity".

Would you agree in that statement ?

A Yes I would.

Q Now then here, and I am taking the time of the Board to read this because I think it illustrates the problem we are up against.

THE CHAIRMAN: I have read it Mr. Chambers.

MR. CHAMBERS: Then now this is the proposition that Mr. Justice Jackson puts:

"Let us assume that Doe and Roe each produces in West Virginia for delivery to Cleveland the same quantity of natural gas per day. Doe however, through luck or foresight

or whatever it takes, gets his gas from investing $50,000 in leases and drilling. Roe drilled poorer territory, got smaller wells, and has invested $250,000. Does anybody imagine that Roe can get or ought to get for his gas five times as much as Doe because he has spent five times as much? The service one renders to society in the gas business is measured by what he gets out of the ground, not by what he puts into it, and there is little more relation between the investment and the result than in a game of poker".

Does that illustrate or coincide with your proposition ?

A I think it does.

Q Then he goes on:

"Ultimately Mr. Justice Jackson seems to come to the conclusion that the case should be remanded to permit the Commission to say what should be the price of the product, setting such price arbitrarily on the basis of such evidence as it can gather as to the value of the community".

It is obvious that should be commodity.

"He, indeed, sets an ambitious and difficult task for the Commission. He admits that such is not the domain of the Courts, but urges that the Commission can, and should undertake the duty ."

I am putting that to you as the position of Mr. Justice Jackson which is referred to by Mr. McEntire.

A Yes.

Q And then Mr. McEntire at the end or later on in his article says this:

"Assuming that action by the Congress could be secured that

would furnish appropriate authority and standards, it would seem that one of two methods might be devised to give reasonably adequate and fair results".

And I would like to direct your mind to his suggestion.

A Yes.

Q "The first possibility would be adoption of some method of fixing a fair price for the commodity at the well head by administrative action along the lines set forth in Justice Jackson's dissent in the Hope case. This would have the effect, of course, of enriching certain gas transmission companies. I hesitate to say that it would be an unjust enrichment. In other situations, it might be exactly the reverse, and some companies might lose thereby. But, it is inescapable that some of them would be getting something for nothing".

Then he goes on later and says:

"There seems to me to be little excuse for allowing the rate paying consumer at the burnertip to profit by the wildcatters good luck or requiring him to pay for the wildcatters mistakes. Nor is there any reason why one consumer, attached to one line, should profit because the company that furnishes him service has been fortunate in its undertakings or shrewd in its business dealings, or lucky in acquiring proved acreage from bankrupt speculators, while his brother consumer at another locality is paying excessive rates because the utility with which he is connected - through no fault of his own and without his freedom of choice or selection - has been unfortunate, unlucky, or unwise".

Now as I understand it that you are to make a submission or are to make a study of competitive rates, but I am asking you Mr. Zinder now whether you have any further light to give us on this matter in view of what I have read to you and your knowledge of the problem. As I understand it there is a Board in the States at this moment getting ready to deal with a similar problem ?

A The Federal Power Commission is in one sense dealing with it. I can only answer your question Mr. Chambers by stating that I have not only been concerned with the problem while on the staff of the Federal Power Commission but since that time have been very much interested in it and particularly in view of this assignment have made as much study as I can of the problem and of all possible avenues of approach to this problem as stated by others and I know to be so from my own experience it is a unique problem and the submission I have made here in direct testimony represents the very best evidence that I know of that could be gotten together on this problem for this particular case.

Q Thanks Mr. Zinder.

Q THE CHAIRMAN: Mr. Zinder, supposing when you have reached your conclusion as to the competitive price of gas as compared with coal as the next fuel that would be in line, and suppose you reached a figure and you yourself believed that the public would not buy gas at that figure, then can you devise for me a means by which I can reduce that upper level or topmost level of cost to a point at which the consumer would buy gas ?

A The same study, Mr. Chairman, that would show that the consumer would not pay all the costs involved would I think also show what that upper limit would be. With that upper limit in terms

of retail rates you can determine or the total cost that gives a figure as to the total cost available to be distributed to all those participating in rendering that service including the producers, then I would judge that deficiency might be distributed in some equitable manner. Just what that would be between all the parties participating in that service, that would seem to me to be the fair thing to do Mr. Chairman.

Q Can you give me a formula by which I might do it ?

MR. STEER: You said yesterday it had to be a judgment figure.

THE CHAIRMAN: Which means an arbitrary figure.

MR. STEER: Absolutely.

A I do not know of any formula as such.

THE CHAIRMAN: My experience in other so called utility matters where you increase the rate, you get a drop in revenue immediately because people are annoyed at having to pay more than they were paying before, but that revenue is quickly recovered because they say I would rather pay than do without it, and your revenue recovery comes right back. That I know would depend upon the percentage of increase as to how fast your revenue would come back, if it all would come back. But that has been my experience in other matters. Do you know of any case where any Board or Commission after hearing evidence has fixed as opposed to adopt, but has fixed a well head price on some scientific or almost scientific basis ?

A I do not know Mr. Chairman. I have made a search of various Commission decisions and have watched very closely decisions in recent months and over recent years and I have not found any that dealt with fixing a well head price or a field price on a formula other than what the Federal Power Commission did

in its decision.

Q And I would judge they merely adopted going values that existed before they were called on to adjudicate ?

A With respect to well head prices, Mr. Chairman, no. They apply the original cost less depreciation formula with respect to production properties owned or controlled by the transmission company and adopted the going price or the contract price between a non-affiliated producer and the company that they were regulating where the purchases were from non-affiliated producers.

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Q THE CHAIRMAN: Well when you say they adopted the investment as a basis for all the pipe line companies, that would be the investment in the well itself?

A That is right.

Q As distinct from the well plus the pipe line?

A That is right.

Q MR.CHAMBERS: Mr.Zinder, if I might in reply to Mr.Steer just now where you answered Mr. Steer with reference to this matter of judgment, that it would be an arbitrary one, that it would be, in effect, arbitrarily done, is that right?

A I would not consider that any judgment need be arbitrary, Mr. Chambers. I should think that in exercising that judgment it would be from certain tests, certain principles and certain facts such as can be gathered together that might be of importance or related to the problem. It would be an informed judgment I would assume.

Q You remember that I read to you or referred you to Section 72 (1a) which, in effect, gave the Board direct mandatory authority with regard to the rate base and so on for the wells and so on if it saw fit?

A Yes.

Q And it says under a just and reasonable method?

A Yes.

Q I am going to read to you briefly, and it may not add much to our discussion, but it did occur to me that it may illustrate what you had in mind as a matter of judgment, and I am referring now to what Mr. Justice Frankfurter said, you probably heard these words, he said "Of course, the statute is not concerned with abstract theories of rate making. But its very foundation

is the 'public interest' and the public interest is a texture of multiple strands." Have you heard those words before?

A Yes.

Q "It includes more than contemporary investors and contemporary consumers. The needs to be served are not restricted to immediacy, and social as well as economic costs must be counted." Would you say that that might be a good approach or rule that you would recommend to the Chairman of this Board in approaching this problem?

A Well it sounds reasonable.

Q Thank you, Mr. Zinder.

THE CHAIRMAN: To which, of course, I would be entitled to add my own peculiar ideas.

MR.CHAMBERS: Always if just and reasonable.

THE CHAIRMAN: Mr. Harvie?

.....

CROSS-EXAMINATION BY MR. HARVIE

Q I think my task has been very much simplified by the very thorough cross-examination by the other Counsel. So my cross-examination really comes down to one or two points at the present time, having in mind that Mr. Zinder will be back and give further evidence on some other points. But just arising out of the remark of the Chairman, Mr. Zinder, did I gather from you that you said that the Federal Power Commission adopted as the field or well head price of gas owned and purchased by the pipe line or the utility company the actual cost without giving any commodity value to the gas?

A That is right.

Q And then in cases where they bought from a third party, it was purely a contractual bargaining basis?

A In those cases they accepted the contractual price.

Q So that that gas each time came from the same field, and there would be two prices?

A That is right. And there were, in fact, a number of the cases decided by the Federal Power Commission, one price which they found reasonable for the affiliated producer, and another price which they accepted which was a bargain price.

Q Do I gather that you always agree with the practice of the Federal Power Commission?

A No, I cannot say that I do, and they do not agree with me either.

Q Do you in that particular case where they give no value for gas as such have a commodity value?

A It is my conviction, Mr. Harvie, that the proper basis is the value of the gas at the well, and not the investment approach used by the Commission.

Q Just on that point, how is the royalty set on gas purchased from a well owned by these pipe line companies?

MR. McDONALD: In Texas?

Q MR. HARVIE: In any place. How is the landholders' royalty set? Or are the royalties on a percentage basis, are they?

A Yes, that is right. That is an arrangement entered into between the producer and the landowner.

Q So that in the case of pipe line companies and the landowner, what the landowner would expect as royalty, that is in the pipe line company cost in production?

A That is right.

Q And has no relation to percentage of anything, it is purely an agreement?

A Well, those royalty contracts, many of them are very similar.

Pardon me, may I have the question again?

BY THE REPORTER READING: " Q. And has no relation to percentage of anything, it is purely an agreement?"

A It is an agreement between two parties. It might be a per cent of a stated market price for the gas.

Q MR. HARVIE: Would it be a normal practice to adopt the same royalty as paid to landowners for gas purchased from the third party?

A I do not know, sir.

Q Mr.Zinder, you have told us that the Federal Power Commission has adopted the practice of arriving at the value for rate base purposes of old assets dedicated to public service for the first time by using historical or original costs, that is their first approach?

A That is right.

Q How do they depreciate as a general practice?

A As a general practice, pipe line property, that is the transmission systems, that is depreciated on a service life principle and a straight line basis. Production system property particularly your production property is on the depletion basis and usually on a unit depletion basis.

Q And in arriving at whatever figure that might be, do they look and see if there is any other factor that should be given consideration to?

A Yes. If the reserves back of the transmission property is shorter, of shorter life, than the physical or service life of the transmission property, then the life of the reserves is adopted as the service life for the transmission property. In other words, then it is not on a physical life basis but on a functional life basis.

Q THE CHAIRMAN: And in a straight line method?

A And still in a straight line method for the transmission property.

Q MR. HARVIE: Any other adjustments that they adopted?

A You mean when the property is investigated in a formal case?

Q Yes?

A And coming under regulation?

Q For the first time?

A There is a recomputation of the depreciation and depletion reserve, and in fixing rates or determining the amount of return available, the Commission has used and recomputed depreciation and depletion reserve or accrued reserve for the purpose of determining the rate base.

Q What principles do they adopt in the recomputation?

A In making that computation?

Q Yes?

A They go over the life of the property and using the rates of depletion that they found reasonable, and the depreciation rate found reasonable, reconstruct the reserve for the recomputation.

MR. McDONALD: Reserve of depreciation?

A That is right.

Q We are speaking of reserves meaning gas?

A That is right.

Q MR. HARVIE: And this Federal Power Commission is a comparatively new body, a matter of six or seven years of age, as far as the function of the gas industry is concerned anyway?

A That is right.

Q And what is your view as to their practice of taking historical or original cost basis as being a fair and proper one under the circumstances?

A Well, my view is that original cost is the proper basis for determining the rate base for that property, which comes into regulation and into the system following the passage of the Act. My own feeling and conviction is that with respect to a company not heretofore regulated, that the property that went under regulation should go in on a fair value or value-as-of-that-date basis.

Q That is a replacement basis?

A That would be a reproduction, essentially a reproduction cost basis. It has some similarities to property being purchased for public ownership or by a public body, I feel.

Q Expropriation you mean?

A Yes. Now, as Mr.Chambers stated here earlier to me, that there are various classes of business, private business, public ownership and public utilities. I do happen to know that many municipal utilities purchased by Federal agencies or purchased by the municipality and by State agencies, that in a number of those cases, and in most of them to my knowledge, the transfer from private ownership to public ownership was made at a value in excess of the original cost found for that property by the Federal Power Commission.

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Q Do you think that that procedure has some merit where it applies to assets which were constructed before the passage of the Act?

A Yes, I certainly do so.

Q And just why?

A I think that from the point of view of fairness, the industry was operating under certain laws and regulations with respect to its profits and its operations. It had essentially a free range. On that basis it could make decisions with respect to either taking profits now or subsequently. It might decide to reinvest in property rather than taking earnings. All decisions were made by that company under those regulations and I think the profits that it made and the appreciation in value of the property that it accumulated as of that time really belongs to the company and to come along and say that you are going to allow them now original cost and go back to the year one of that company's history, is really changing the rule on them retrospectively, that is in the past.

Q THE CHAIRMAN: But supposing the current price levels were lower than the historical cost.

MR. HARVIE: I was just going to carry on with that.

THE CHAIRMAN: Go ahead.

Q MR. HARVIE: I was going to say now, the practice of the Federal Power Commission to take historical cost and in the event that the net figure they arrive at is a representation of that figure and is, we will say, away in excess of those replacement costs, do they make a practice of making an adjustment downward or do they just take it at that?

A Well all I can say is that they have not met that situation yet, Mr. Harvie.

Q Have they met the reverse situation?

A Yes.

Q And what do they do there?

A With the reverse situation they have taken original cost where original cost was less than present-day value and I do not know of any case that came before the Commission where they took action on it or any case that came before the Commission where original cost was higher than reproduction cost.

Q Would you say that the same would apply to your calculation of costs, that is the replacement?

A I think that the, my opinion would be that whether replacement costs or the present value was above or below the original cost,would be immaterial.

Q In that case, they take the good with the bad?

A That is right.

Q THE CHAIRMAN: And if you were presently the owner of an utility company under those circumstances and you were coming before me to go under regulation for the first time, which would you ask for, historical cost or reproduction new, if price levels were below the historical cost ?

A Well, Mr. Chairman, I think an honest answer to that would be that I would come to you and ask for the higher value and probably I would not get it.

Q MR. HARVIE: I think we all agree that that is likely.

A I do not think I would be human if I did not.

MR. HARVIE: Mr. Zinder, or rather Mr. Chairman, I

was going to deal in some detail to try and clarify in my own mind and I think perhaps in the minds of some of the others, Mr. Zinder's theory on the allocation of costs by demand and volumetric methods. But over the noon hour I just mentioned it to him and he showed me a statement he had prepared, that would give effect to his theory.

WITNESS: That is right.

MR. HARVIE: And I wonder if we might see that now.

MR. McDONALD: I will produce that, Mr. Chairman.

STATEMENT PRODUCED HERE
MARKED AS EXHIBIT 129.

Q MR. HARVIE: And I think you might deal with this, Mr. Zinder.

A All right. I have taken for the purpose of illustration only an example showing the demand and volumetric method of cost allocation. I termed this calculation, which is marked Exhibit 129 as a "simplified illustration", which really is largely because of the time available and largely because I understood this is to illustrate more the principle than any refinement inthe method.

I am assuming a plant,- it may be any plant, - being an utility plant of $100,000 and purely for the purposes of making easy calculations, a rate of return of say 10%, which is $10,000.

I am assuming that the depreciation is $10,000 annually, and that income taxes would be $5,000.

And operating expenses, including all expenses of operation, labor, material, general administrative expenses, distribution expenses and so on, the usual category, all operating expenses of $10,000.

Making a total operating expense of $35,000.

I am assuming further that the peak load is 20,000 mcf's and that the maximum load at the time of the peak, the maximum load on the transmission system if it is a transmission property, or on the distribution system if it is a distribution property, and so forth.

There are two customers in this example, "A" and "B".

At the time that that peak load of 20,000 mcf's was established customer "A" used 15,000 mcf's and customer "B" 5,000 mcf's. Now actually customer "A" and customer "B" can be a group of customers as well as single customers. I am using it as though they were single customers in this simplified case.

The total volume is 3,000,000 mcf's sold during the year in question, each customer using a million and a half.

Now I next set up two columns, a "demand costs" column and a "volume" column. It should really be, to be consistent, "volume costs" but I hope you will bear with the fact that it was done at noon and I did not make all the refinements.

The rate of return I show in the "demand" column. I put all of it there, $10,000.

Depreciation I show as a fixed charge, $10,000 in the "demand" column.

I take the income tax, which is related to the investment in the cost return as relating to the investment, and put it in the "demand" column of

$5,000.

And operating expenses goes down, goes into the "volume" column,

So my "demand costs" are $25,000.

My "volume costs" are $10,000.

Now I next place those total costs on a unit basis. I take the $25,000 of "demand costs" and divide it by the total volume, which gives me $1.25 per mcf. per year of peak load demand.

The $10,000 I divide by 3,000,000 mcf's, the total volume, which gives me a figure of 1/3 of a cent per mcf.

Understand these are hypothetical figures and the actual quantities or units have no significance except for illustrative purposes.

Then I am ready to allocate my costs. I have determined what my unit costs are and I am ready to allocate them.

Customer "A" had a demand responsibility, as I would call it, of 15,000 mcf's. I multiply that by a dollar and a quarter and he thereby shows $18,750 as his share of the demand costs.

I multiply his volume by 1/3 of a cent and he shares $5,000 or half the volume cost.

Therefore the total cost of my customer "A" is $23,750.

As a matter of interest I showed what his average rate would be, or what the average cost is, whether it is the rate or cost, it would be 1.58 cents per mcf.

Customer "B" shows, in the same manner, a total cost of $11,250, or an average of 3/4 of a cent per mcf.

Now as I say that is a simplified illustration but I hope it illustrates the principle.

Incidentally, I would like to point out, a question was asked me with respect to the effect of the load factor and I think this example illustrates that effect on costs. Here are two customers used in this illustration, both using the same quantity of gas, yet the average rate for one is 1.58 cents and the other 3/4 of a cent, the reason being that the customer "B" has 1/3 the demand and normally would require proportionately 1/3 of the investment to serve him for the same quantity of gas.

MR. STEER: You do not mean 3/4 of a cent, you mean 75 cents.

MR. McDONALD: No.

THE CHAIRMAN: No, 3/4 of a cent.

MR. STEER: Oh I understand, yes.

Q MR. HARVIE: Mr. Zinder, in your evidence on the 12th, at page 3993, after mentioning this basic value of cost, you state:

> "I might add that this basis of cost allocation is that which was used by the Commission staff under my direction almost without any exception."

That was the Federal Power that you had reference to?

A That is right, and those principles.

Q And this is an illustration which you have given us here in Exhibit 129 of the application of those principles to

allocation of costs?

A Yes. I did, back in my earlier testimony, indicate some differences as to the refinements, I would call them, as compared with simply taking fixed charges as demand costs and volumetric costs, operating expenses as volumetric costs, but it was not done in that simplified fashion.

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Q Having in mind the picture as you know it with which we are faced now in the Turner Valley situation I wonder if you would be good enough to give this example you have given us further consideration and you can give your answer now, either now or later on your return, to see if there are any other factors which you think should be given effect to in arriving at the basis of allocation. You will let us have that then ?

A I will.

THE CHAIRMAN: Any further cross-examination of Mr. Zinder ?

CROSS-EXAMINED BY MR. FENERTY:

Q Might I clear up one item at the expense of rising twice or three times. I want to get the effect of the statement you made to Mr. Chambers, Mr. Zinder. As I got it you said that the gas which would otherwise be flared has a market value because it is conserved. I got that right, didn't I? I think that was the question asked.

A Yes I thought I said that, to put it a little bit differently, that the fact it is going to market and it has to be conserved for the market it has added value to it.

Q But the question was dealing with the gas which otherwise would be flared. You see the kind of gas that was flared before ?

A Yes.

Q Has a market value because it is conserved. That is it is put back in the ground. You I think also told us that the consumer should pay for those costs of repressuring, putting back ?

A I said if he benefits by that conservation he should share the cost of repressuring.

Q Oh yes I see. He did not pay the whole cost ?

A If someone else benefits he would not pay the whole cost.

Q Well he will pay part of it anyhow. Now the parties who pay those costs have created the whole value for that gas have they, the market value which would otherwise be flared ?

A No I would not say that they have created the whole value of it. They might have created the whole value at the moment, over a period of time.

Q There would be no value at all if it were flared ?

A It might still have a value even though it is flared.

Q A market value ?

A Yes.

Q Even though it were flared it would have a market value ?

A It might have a value, as I was saying commodity value if someone came into the field. I say that is just a possibility, or a remote possibility.

Q Would it have any practical value in dollars and cents ?

A I do not think so.

Q Except making this climate warmer or something like that ?

A Except what ?

Q Except making this climate warmer or something like that. It would not have any practical value.

THE CHAIRMAN: It would have the same value as a dollar bill that you lose. If you find it again it has value.

Q MR. FENERTY: Quite frankly I did not understand what Mr. Zinder said, other than that it has a market value when it is flared. That is to the oil operator ?

A Yes, that is right.

Q But you take a consumer and someone else joining up with him perhaps in creating the whole value, market value ?

A Yes.

Q He has created it. He has paid for it and it would otherwise be flared. Now having paid for it if he wants to get any benefit from it he is going to pay for it again isn't he when he uses it ?

A I would not say so. That gas has been given a certain value at the well by the market, at one point, that is its value at the well. It is the value we are speaking of at the well. It is that value as I see it at that well head and there are certain costs to bring it to market including storing it over a period of let us say some fifteen years.

Q Yes, and that would be paid for when it is used ?

A Yes.

Q So you have got your consumer who has paid the entire cost of having that gas available hasn't he ?

A Yes, under those conditions.

Q He has created the value of it by paying something, the compression costs and he pays the full value of it again when he uses it does he not ?

A He is not paying the full value of it again when he uses it. I am saying there is a value of that gas at the well now made by this market. Now there are certain costs. That is the value at the well which represents, we are expressing it in terms of a price at the well. Then there are certain costs to bring it to the market. There are certain costs of storing. I say that those are - he is not paying for the gas again. He is paying for certain services rendered in connection with that gas.

Q Let me simplify it then, gas which would otherwise be flared and which is repressured and the cost of that operation is paid

for by the consumer I suggest to you if he has paid for that gas which otherwise is blown off in the air and wasted should not it be his gas. He has paid for it.

A I do not think so.

Q THE CHAIRMAN: If currently he paid the well head price before it was put down in the ground ?

A Yes.

THE CHAIRMAN: That is not being contemplated here ?

Q MR. FENERTY: I am only talking about the gas which Mr. Chambers said would otherwise be flared. He has paid for the cost of that gas in full if he pays the compression cost. Otherwise it is flared and we do not know where it has gone. That is so is it not ?

A I would not think so Mr. Fenerty.

Q All right if it is not. I am trying to see where I am going wrong in my reasoning. You have a volume of gas that would otherwise be flared ?

A Yes.

Q Somebody captures it and it is not flared ?

A Yes.

Q And as a result of that person capturing that gas at an expense to himself you say that somebody else is going to get a price for it. That is what you say don't you ?

A No I am saying that there is a value to that gas Mr. Fenerty at the well, that that has a value at that point. Then there are certain costs on top of that to bring the gas from the well to the market.

Q Yes.

A And when the consumer pays those costs of bringing it from the well to the market he has not paid for the gas himself.

Q And who pays the cost of bringing it to the flare if it is otherwise flared ?

A If it is otherwise flared ?

Q Yes.

A I would say that probably it is reflected somewhere, whatever costs there are in the price of oil or gasoline.

Q But when the consumer lays out money to preserve that gas he has no interest in it except to pay for it when he uses it, is that it ?

A Could I get that question repeated by the Reporter

(By the Reporter reading) But when the consumer lays out money to preserve that gas he has no interest in it except to pay for it when he uses it, is that it ?

A Well that raises one complicated factor namely whether the present consumer or the future consumer would pay for it. Aside from that problem let us say the consumer would pay for it, yes.

Q Is that a fair statement, and then I will stop, that the operator or somebody between the operator and the consumer is paid for keeping it and he is paid again when he sells it and the consumer pays for creating the value and he pays again whatever the value may be again when he burns it. Is that correct ?

A Let us see. Would you repeat that to me again ?

Q (By the Reporter reading) Is that a fair statement, and then I will stop, that the operator or somebody between the operator and the consumer is paid for keeping it and he is paid again when he sells it and the consumer pays for creating the value and he pays again whatever the value may be again when he burns it. Is that correct ?

A I do not think so.

Q Thank you.

THE CHAIRMAN: Mr. Fenerty, in order that I may understand, is there any such thing contemplated by any submission that has been made to the Board, such as you have just put to Mr. Zinder?

MR. FENERTY: No, that arose out of a suggestion that the consumer should pay for repressuring, that was all. Somebody brought it up, I do not remember who.

MR. McDONALD: Yesterday Mr. Zinder referred to the case before the Corporation Commission of the State of Oklahoma, the Cabot Carbon Company in respect to a carbon black plant. This is the complete order. I have not had it typed but I thought possibly we could mark it as an Exhibit and I will distribute it later.

THE CHAIRMAN: Yes, someone asked for that.

MR. CHAMBERS: I was wondering - -

MR. McDONALD: It could be put in the books.

THE CHAIRMAN: Has anyone any objection to that being done?

MR. McDONALD: It is just adding to the cost of our book. I can have it typed out and distributed.

MR. HARVIE: I think it is handier in that form.

ORDER OF CORPORATION COMMISSION OF THE STATE OF OKLAHOMA IN RE CABOT CARBON COMPANY IS NOW MARKED EXHIBIT 130.

THE CHAIRMAN: What is it ?

MR. McDONALD: A report of the Commission and findings in the case of Cabot Carbon Company and it is in respect to an application for permission to build a carbon black plant in Texas County, Oklahoma.

MR. HARVIE: That is the Oklahoma Commission, Mr. McDonald, the Oklahoma Commission.

There was just one other matter Mr. Chairman, before Mr. Zinder leaves the box. I may say with regard to the

Re-direct examination since Mr. Zinder will be over some of these matters he reserved, we have not had an opportunity of considering his evidence, we will stand that over until his next appearance. However, Mr. Zinder is interested in the preparation of the submission by the Producer's committee on competitive costs on fuel in Calgary and we feel it relevant to the preparation of that, to this Hearing and to the preparation of the submission that we should obtain from the Gas Company the following information:-

First, a statement of the various rates for the various classes of service of the Gas Company for the period 1921 to date.

THE CHAIRMAN: I suppose you could get that from copies of the Board's Orders ?

MR. McDONALD: All I require from the Gas Company is a direction as to where it could be obtained.

MR. HARVIE: Was the last rate approved of by the Board?

THE CHAIRMAN: There was approval given I think, the last one was in 1939. There was a revision downwards in 1943 and there was a reclassification with respect to the former rate in 1944.

MR. McDONALD: That was rate No. 6.

THE CHAIRMAN: Yes.

MR. McDONALD: Well either the information direct or a direction of where we can get it.

Secondly the pressure basis used for sale of gas to various classes of customers. As I understand in connection with that item that gas is delivered under different pressures to different customers in different areas in the city. We would like to know the particulars of the basis of the

Discussion.

delivery, if there are any differences.

Thirdly, the class of customer and the number of customers and the consumption per customer by years.

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THE CHAIRMAN: What do you mean by class of customer?

MR. McDONALD: The classification adopted by the Gas Company, domestic, commercial and industrial.

THE CHAIRMAN: You said by customers you did not mean that?

MR. McDONALD: No, by class of customer and the number of customers in each classification and the consumption per average customer.

THE CHAIRMAN: The average consumption per customer?

MR. McDonald: Yes.

MR. HARVIE: Or per class.

MR. McDONALD: That would be for the Northwestern and the Canadian Western systems?

THE CHAIRMAN: The Northwestern did you say?

MR. McDONALD: Which goes to make up the figures shown in Appendix A to the submission which the Gas Company has filed in regard to competitive fuels.

THE WITNESS: That is Appendix 7.

THE CHAIRMAN: I have not looked at that?

MR. McDONALD: No, you have not looked at it. The only thing is if we are going to comment on it we want the information.

THE CHAIRMAN: Have you any objection to giving him that, Mr.Steer?

MR. STEER: I am not in a position to say, Sir, until I have seen what is required and have considered it. If my learned friend had supplied me with this information two or three days ago I might have had an opportunity of giving an answer now. But I cannot.

MR. CHAMBERS: The Public Utility Board orders would give that information of the rate in effect.

MR. STEER: I would like an opportunity to consider that, Mr. Chairman. If I decide that my friend is entitled to what he asks for, I will get it for him and let him know. Otherwise I will let him and you, Mr. Chairman, know.

MR. McDONALD: I have one more item. By years for the past ten years the number of domestic and commercial gas heating consumers broken down between gas-fired furnaces and converted furnaces. Also for the same period the company's estimate of the percentage of saturation of the respective markets that is by classes, and for the same period of years the total number of domestic and the total number of commercial customers.

THE CHAIRMAN: Is there anything further before we release Mr.Zinder?

MR. HARVIE: Not before we release Mr.Zinder. There was just to see if we could get some indication of the Agenda when we reconvene.

THE CHAIRMAN: Did any one of you receive this morning Professor Stewart's submission?

MR.HARVIE: I did not.

MR. CHAMBERS: I have not received it yet.

THE CHAIRMAN: I thought perhaps they might have been here.

MR.HARVIE: I have not been back to the office since I got back from my holidays and I have not received it. I do not know.

THE CHAIRMAN: Well they were completed on Monday and he had hoped to deliver them to my office in Edmonton on Wednesday. I anticipate you will have them this week. I was going to propose that we take his evidence on the 3rd of

December. For two reasons. One is that Mr. Blanchard must be in Criminal Court on the week of the 3rd of December, and he does not feel he needs to be present to hear Professor Stewart's evidence. He can give his own evidence and be subject to cross-examination. If anything further was required it could be done later on. Then to follow as soon as we are through with Processor Stewart, to follow on with Mr. Hamilton and carry on with him and hope to finish him before Christmas. If not then to start again when we resume in January, whatever date that may be, with Mr.Zinder. What is the date, Mr. McDonald?

MR. McDONALD: We will have to do the same. Mr. Zinder cannot give us an exact date just now.

THE CHAIRMAN: Still we will know by the middle of December?

MR. McDONALD: Yes.

THE CHAIRMAN: That is my suggestion, Professor Stewart on the 3rd of December, to be followed by Mr. Hamilton.

MR.HARVIE: Is it hoped to extend the length of the sittings each week into four days?

THE CHAIRMAN: I am willing to do that subject to what Counsel wish. Is there any objection to sitting four days?

MR.HARVIE: I am not applying for that.

MR.CHAMBERS: I think it is a good idea, and I think we can all do it, as far as having material to proceed with if we had the submissions ahead of time.

MR.BLANCHARD: I feel I am always obstructing this Hearing.

THE CHAIRMAN: You started off on a certain basis

and you have made your arrangements accordingly.

MR.BLANCHARD: It is very difficult, Sir, to do the other work that I have to do, if we sit more than three days a week. I am anxious to see this through.....

THE CHAIRMAN: I am not going to impose four days on Counsel if it does not suit them.

MR. BLANCHARD: Any time I can I will be glad to, Sir.

THE CHAIRMAN: We will adjourn until the 3rd of December, at 9.30.

MR.HARVIE: And we will be sitting on the weeks of the 3rd and the 10th?

THE CHAIRMAN: And the 17th.

MR.HARVIE: That is what I was wondering, getting witnesses coming from out of town.

THE CHAIRMAN: Yes, and the week of the 17th.

(At this stage the Hearing was adjourned, until 9.30 A.M. December 3rd, 1945.).

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